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The Effect of Language Learning Strategy Instruction on Listening Comprehension Proficiency and Strategy Use of Learners of German as a Foreign Language

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *The Effect of Language Learning Strategy Instruction on Listening Comprehension Proficiency and Strategy Use of Learners of German as a Foreign Language* submitted by Cameron Geoffrey Archer in partial fulfilment of the requirements of the degree of Master of Arts in Applied Linguistics.

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Date: 19 August 2002

This thesis is dedicated to my loved ones.

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ABSTRACT

This study investigates the effect of explicit language learning strategy (LLS) instruction on the listening comprehension proficiency and reported strategy use of university students of beginners' German. Students were divided into an experimental and a comparison group, and the treatment consisted of LLS instruction integrated into listening comprehension tasks. Each student completed a listening comprehension proficiency test and a listening strategies questionnaire before and again after the treatment period. After the treatment period, a selection of students took part in a think-aloud procedure.

LLS instruction did not appear to increase student's listening comprehension proficiency or reported strategy use significantly. It might have, however, been successful in promoting guessing and helped students use strategies more effectively. Student feedback to the LLS instruction was overwhelmingly positive. These results lead to the conclusion that LLSs are a valuable part of instruction. This paper includes a section on how to teach LLSs.

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Chapter I

Introduction

1.1 Background

In my first year teaching beginners' German to university students, I encountered students like Frank[1]: intelligent, eager to learn, but still not as successful as I thought they could be. Unfortunately, they did not even seem to be aware of their language learning potential. Their lack of self-confidence hindered these students, particularly from being successful listeners. During listening comprehension tasks, some students would throw their hands up in despair, claiming they had understood nothing. Further prompting revealed, however, that they had understood parts of the text, but were unable to use this information to help them understand any more of the text. They did not realise that they did not need to pick up on all of the details. Below, Frank verbalises his thought processes as he tries to understand the following segment from an oral text.

Tape:
Speaker: *Fünf rote Rosen. Darf ich sie Ihrer Freundin schicken?*
(female voice) 'Five red roses. May I send them to your girlfriend?'

Speaker: *Nein, nein, ich gebe sie ihr lieber selbst. Hier bitte, hier sind DM25.*
(male voice) 'No, no, I'd rather give them to her myself. Here's DM25.'

Speaker: *Dankeschön!*
'Thank you!'

Frank:
So, uh, it sounds like – At the end it sounds like they reach some sort of agreement and he buys something. He gives her *DM 25*, which is 'DM 25,' so maybe it's five marks for one rose, so maybe he buys five roses, and uh – yeah, so

[1] To protect their identities, the names of participants have been changed.

it sounds like despite his protest, he uh, he decides to buy the roses anyway, and I'm not -- The clerk also mentions something about his friend. I thought I caught something about that. But what exactly, I wasn't sure and I'm not even sure if I could hazard a guess, actually, it's uh, I really wasn't sure about that, so it looks like he decides to buy something. And she says thank you, and it sounds like that.

Frank clearly has the linguistic knowledge to understand this segment, but in his attempt for a more detailed understanding, he misses the gist.

I wondered what I could do, as these students' teacher, to help them understand German more easily. The answer, as I discovered, was to help them help themselves by teaching language learning strategies (LLSs). In my second year, I included LLSs in listening comprehension instruction. An investigation of the effects of LLS instruction should provide a more solid empirical base for what teachers do in the classroom.

1.2 Research questions

To evaluate LLS instruction, I conducted a study, investigating its effects. The following questions formed the basis for the study:

1. Does explicit LLS instruction integrated into listening comprehension tasks increase students' listening comprehension proficiency?
2. Does explicit LLS instruction integrated into listening comprehension tasks increase students' reported listening comprehension strategy use?
3. Does explicit LLS instruction integrated into listening comprehension tasks help students use LLSs more effectively?

1.3 Definition of terms

'Language learning strategies' are "deliberate cognitive steps which are used by learners to enhance comprehension, learning and retention of the target

language, and which can be accessed for conscious report" (Vandergrift 1992, adapted from Rigney 1978 and O'Malley and Chamot 1990). **'Listening comprehension strategies'** are LLSs applied to listening comprehension.

'Explicit' LLS instruction (called 'explicit training' by Cohen) is defined as instruction where teachers "inform their learners fully as to the strategies that they are being taught, the value and purpose of these strategies, and ways that they can transfer the strategies to other learning tasks (1998: 93).

1.4 Delimitations

This study involved 34 undergraduate students at the University of Alberta during the Fall/Winter Session of 2001/2002. Students were between the ages of 17 and 38 and had little or no knowledge of German before the course started.

1.5 Limitations

1) A 'think-aloud' procedure was used to investigate students LLS use. During this procedure, participants verbalise their thought processes as they complete a task. During the think-aloud sessions, students may not be able to remember all of their strategies completely or put all of them into words.

2) Due to time constraints, not all students participated in the think-aloud procedure. Because of the small sample size, the results from this procedure cannot be considered representative of the entire group.

3) Because the investigator taught only one section of Beginners' German, two sections taught by different instructors had to be compared. Differences between the two groups after the treatment could be due to variables other than the treatment.

1.6 Assumptions

1) Listening comprehension proficiency can be measured by means of a standardised test.

2) Listening comprehension strategy use can be measured by means of a questionnaire.

1.7 Overview of the thesis

In this chapter, the purpose of the study was presented, central terms were defined, and assumptions, delimitations, and limitations were recognised. The second chapter reviews the literature on LLSs, in particular listening comprehension strategies, and LLS instruction. The third chapter describes the methodology used to address the research questions. The fourth chapter presents the results of the study. In the final chapter, the results are discussed, conclusions are drawn, and implications for language teaching and further research are presented.

Chapter II

Review of Language Learning Strategies and Language Learning Strategy Instruction

2.0 Overview

Over the past two decades, there has been a shift in the focus of research from the language teacher to the language learner, including how successful learners reach their goals. This chapter will review the literature on LLSs and LLS instruction, beginning with the first studies of successful language learners. The review will continue with the contributions of Wenden, O'Malley and Chamot, and Oxford. A review of the literature on listening comprehension strategies and a brief section on LLS research in Germany will follow. The chapter will conclude with a review of the research investigating the effect of LLS instruction and the literature on how to teach LLSs.

2.1 Language learning strategy research

2.1.1 The "good language learner"

Language learning strategy research has its roots in the study of the "good language learner." This was done to identify characteristics and behaviours for less successful learners to emulate. Stern (1975) and Rubin (1975) suggest some preliminary general characteristics of good language learners, based on classroom observation, their own teaching experience, and intuition. According to Stern (1975), the good language learner:

- has a personal learning style or positive learning strategies
- has an active approach to the learning task
- has a tolerant and outgoing approach to the target language and empathy with its speakers

- has technical know-how about how to tackle a language
- has strategies of experimentation and planning with the object of developing the new language into an ordered system and revising this system progressively
- is constantly searching for meaning
- is willing to practise
- is willing to use the language in real communication
- has self-monitoring ability and critical sensitivity to language use
- is developing the target language more and more as a separate reference system in which they are learning to think.

According to Rubin (1975), the good language learner:

- is a willing and accurate guesser
- has a strong desire to communicate
- is uninhibited
- is willing to practise
- monitors his or her own speech and the speech of others
- is prepared to attend to form
- attends to meaning.

The items on these lists are a combination of characteristics and behaviours, but the lists are still a good starting point for a discussion of LLSs. Both Stern and Rubin recognised the need to conduct empirical studies to show that successful language learners actually do exhibit the characteristics and behaviours in their lists.

Naiman and colleagues at the Ontario Institute for Studies in Education (including Stern) (1978) attempted to validate Stern's (1975) and Rubin's (1975) lists. Successful high school French students participated in retrospective interviews. Based on the results of these, the researchers identified characteristics, which they called strategies:

- an active approach to learning and practice
- a realisation of language as a system
- an awareness of language as a means of communication and interaction
- monitoring of second language performance
- management of the affective demands of language learning

There is still not a clear distinction between characteristics and behaviours.

Rubin (1981) also attempted to validate her original list by identifying the cognitive processes of second language learners that contribute to learning, i.e., there is a distinction between LLSs and learner characteristics. Although she used formal classroom observation, observation of videotaped one-on-one tutorials, and self-report surveys, the most productive method for identifying cognitive processes was directed diary writing. Rubin (1981) distinguishes between LLSs that contribute directly and those that contribute indirectly to learning:

- direct processes
  - clarification/verification
  - monitoring
  - memorisation
  - guessing/inductive inferencing
  - deductive reasoning
  - practice

- indirect processes
  - creating opportunities for practice
  - production tricks

Naiman *et al.* (1978) and Rubin (1981) had developed a list of learning behaviours that appeared to be related to successful language learning. Still, documentation of relationships or qualitative differences between LLSs was limited.

2.1.2 The role of metacognition

Wenden's (1983) interest in Rubin's (1975) study of the good language learner led her to explore how students select and evaluate their LLSs and what they know about language learning. She did this by interviewing 25 adult English as a second language (ESL) students. Based on this research and her review of

work in cognitive psychology she proposed eight questions that learners might pose to themselves. Table 1 lists the questions and the corresponding decisions within three of the four designators that Brown and Palincsar (1982) used to describe metacognitive strategies (Wenden 1983, 111).

Table 1

Question	Decision
Knowing about learning	
1. How does this language work?	Learners make judgements about the linguistic and sociolinguistic codes.
2. What's it like to learn a language?	Learners make judgements about how to learn a language and about what language learning is like.
Planning	
3. What should I learn and how?	Learners decide on linguistic objectives, resources, and use of resources.
4. What should I emphasise?	Learners decide to give priority to special linguistic items.
5. How should I change?	Learners decide to change their approach to language learning.
Self-evaluation	
6. How am I doing?	Learners determine how well they use the language and diagnose their needs.
7. What am I getting?	Learners determine if an activity or strategy is useful.
8. How am I responsible for learning? How is language learning affecting me?	Learners make judgements about how to learn a language and about what language learning is like.

Wenden's work added to the metacognitive dimension of the existing list of strategies and differentiated these from other types of strategies.

2.1.3 Contributions by O'Malley, Chamot and colleagues

O'Malley, Chamot, and their colleagues at InterAmerica Research Associates conducted a series of studies (O'Malley *et al.* 1985) to identify more specific LLSs and to create and verify a comprehensive classification scheme.

O'Malley, *et al.* (1985) interviewed 70 high school ESL students enrolled in beginner and intermediate classes with none to some proficiency in spoken English and no skill in written English.

A student interview guide was developed, containing questions concerning LLS use with each of nine tasks. Seven of these are typical for the classroom: pronunciation, oral drills and grammar exercises, vocabulary, following directions, listening for main ideas and facts, inferencing while listening (obtaining meaning from context and using predicting skills), and making an oral presentation or report. Two of these are not typical in the classroom: social interactions outside of the ESL classroom and any functional or communication activity, e.g., language used at work, in commercial transactions, obtaining information, etc.. Students were asked to describe "special things they did" or "tricks they used" to study each task. Prompt questions were used to clarify LLS definitions or to elicit LLSs in the rare case that an interview was unproductive.

Students were interviewed in groups of three to five. Beginners were interviewed in Spanish, their first language, and intermediate students were interviewed in English. Interviews were audiotaped and transcribed in abbreviated form.

Each LLS mentioned was described verbatim with the task with which it occurred. The interviews were coded for occurrence of LLSs. The average interobserver agreement was 79% for 4 raters, each measured against a common standard.

Metacognitive and cognitive LLSs were identified using a previously developed classification scheme from cognitive science (Brown and Palincsar 1982). A third metacognitive strategy, self-monitoring, was added to planning and self-evaluation. A third category of LLS, those requiring social mediation, was also added. This resulted in a classification scheme for LLSs. Because the classification scheme was developed in subsequent studies, it will not be discussed until later (p. 13).

Strategy use was reported more with isolated language learning tasks, e.g., vocabulary learning, and less with integrative tasks, such as listening comprehension. This study confirmed the importance of the distinction between metacognitive and cognitive strategies for second language learning.

Chamot and colleagues conducted an extensive project to investigate the use of LLSs by high school Spanish and college Russian students (Chamot *et al.*, 1987; Chamot *et al.*, 1988a, b). Phase I and the longitudinal study of Phase II will be discussed here. The LLS instruction study of Phase II will be discussed below (p. 17). In the descriptive study of Phase I, Chamot *et al.* (1987) interviewed the students, who had been designated effective or ineffective by their teachers, about their LLS use for different types of language tasks.

A General Interview Guide was developed for the study. This described the types of learning tasks that the students were taking part in, followed by questions for the interviewers to ask the students. Researchers had observed in the classroom and identified seven types of language learning activities that were typical of the classroom: vocabulary learning, grammar drills, listening

comprehension, reading comprehension, written composition and oral presentations. Two tasks from outside of class were added: operational or functional communication, e.g., ordering a meal, and social communication, e.g., engaging in a conversation with target language speakers. Students were asked how they approached each of these tasks. More specifically, they were asked about any special tricks or techniques they normally applied to each task, what they did to prepare for each task, how they managed the task while engaged in it, and how they recalled or checked the task after completion, where appropriate.

The Spanish interviews took place in class, so they were restricted to the 50-minute class period. Groups of three to five students were interviewed at one time. The Russian interviews took place during students' free time. Since the time was not restricted, they lasted an hour or more. Only one to three students were interviewed at a time, due to scheduling conflicts. The interviews were audiotaped and transcribed in an abbreviated form.

LLSs were noted with the task with which they occurred and counted each time they were mentioned, except when students were agreeing that they use a strategy that had just been mentioned. An independent rater transcribed the interviews and identified LLSs, resulting in a reliability of .86 for Spanish and .88 for Russian.

LLSs from the contemporary classification scheme that had not been reported were eliminated, and additional strategies that had been reported were added. The category of strategies requiring social mediation was extended to

include affective strategies. This resulted in a revised classification scheme that can also be used for LLSs of foreign language learners.

Students reported using cognitive strategies most frequently. They made up 59% and 58% of the total strategies reported for Spanish and Russian, respectively. Socio-affective strategies comprised less than one percent of the strategies reported. More effective learners used LLSs more often and with greater variety. Although they did not report using as many strategies as successful learners, less effective learners were still familiar with LLSs and were able to report on their own mental processes involved in language learning. The researchers suggested that this may be a starting point for LLS instruction.

In the longitudinal study of Phase II Chamot *et al.* (1988a, b), many of the students from Phase I took part in a think-aloud procedure. 40 Spanish students, of whom 27 were effective and 13 ineffective language learners, and 13 university Russian students, eight effective and five ineffective, continued to participate. These numbers were reduced by graduation and attrition to thirteen Spanish students, eleven effective and two ineffective, and six Russian, all effective, by the end of the study.

Workbooks and interview guides were developed for each level of study containing a variety of language tasks based on types of tasks included in the respective curricula: listening comprehension, reading comprehension, writing, and cloze activities. The interview guide included a script for interviewers to introduce each activity, copies of student tasks, and probing questions, such as "What are you thinking?" and "How did you figure that out?"

Small group training sessions one or two weeks before the data collection sessions acquainted students with the concept of thinking aloud and practised with both English and target language materials. The data collection sessions began with a warm-up, during which the interviewer gathered information such as background and motivation. The sessions continued with the transition stage, during which students were reminded of the training session and practised thinking aloud with a task in English. As they worked on the actual language tasks, students were reminded to think aloud. This was audiotaped and transcribed verbatim.

Because tasks that were too difficult or too easy did not elicit the report of many LLSs, only tasks at appropriate difficulty levels were analysed for evidence of LLSs. Transcripts were coded independently and then compared. Differences in coding were discussed until a consensus was reached. If a consensus was not reached, the strategies were not counted. Based on this coding, the definitions of LLSs were refined. Because of the large number of strategies, only some strategies from Chamot *et al.*'s (1988b) classification scheme will be defined, as they are discussed below.

Again, all students used more cognitive strategies than metacognitive. The metacognitive strategies 'selective attention,' 'self-monitoring' and 'problem identification,' and the cognitive strategies 'note-taking,' 'elaboration,' 'inferencing' and 'summarisation' were found to be used most often with listening comprehension tasks. O'Malley and Chamot define selective attention is as "deciding in advance to attend to specific aspects of language input or

situational details that assist in performance of a task; attending to specific aspects of language input during task execution" (1990, 137). Self-monitoring is defined as "checking, verifying, or correcting one's comprehension or performance in the course of a language task" (O'Malley and Chamot 1990, 137). Problem identification is "explicitly identifying the central point needing resolution in a task or identifying an aspect of the task that hinders its successful completion" (O'Malley and Chamot 1990, 137).

Note-taking is defined by O'Malley and Chamot as "writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a language task" (1990, 138). Elaboration is "relating new information to prior knowledge; relating different parts of new information to each other; making meaningful personal associations to information presented" (O'Malley and Chamot 1990, 138). Inferencing is "using available information to guess the meanings or usage of unfamiliar language items associated with a language task, to predict outcomes, or to fill in missing information" (O'Malley and Chamot 1990, 138). Summarisation is defined as "making a mental or written summary of language and information presented in a task" (O'Malley and Chamot 1990, 138).

More effective students used a greater variety of strategies and used strategies more effectively. They monitored their comprehension and production for overall meaning (as opposed to focussing on individual components) and effectively used prior general knowledge and linguistic knowledge. This study

was also significant because many of the studies that immediately followed it also used a think-aloud procedure.

With their research, O'Malley and Chamot and their colleagues have developed a scheme that can be used to classify the LLSs used by language learners. This classification scheme makes a clear distinction between metacognitive, cognitive, and socio-affective strategies. They also found that more effective language learners use more and a greater variety of LLSs, and use them more effectively.

2.1.4 Contributions by Oxford

Oxford's (1990) LLS classification scheme includes every strategy that had been cited in the literature on LLSs, 62 in all. It mirrors Rubin's categories in that it makes a distinction between direct strategies for dealing with language and indirect strategies for the general management of learning. Direct strategies are those necessary for processing the target language. These are subdivided into memory, cognitive, and compensation strategies. Indirect strategies work with direct strategies for the general management of learning. These are subdivided into metacognitive, affective, and social strategies. Based on this classification scheme, Oxford developed and field-tested the Strategy Inventory for Language Learning (SILL), a questionnaire to assess LLS use.

Compared to O'Malley and Chamot's (1990) classification system, which includes only four socio-affective LLSs, the strength of Oxford's classification scheme is that it represents the social and affective domains well. Affective

strategies help regulate emotions. Social strategies involve learning with and from others.

Affective strategies are further subdivided into the following strategy sets and strategies. The first strategy set is lowering your anxiety using relaxation methods such as progressive relaxation, deep breathing, or meditation, using music, or using laughter.

The second strategy set is encouraging yourself. The most obvious way of doing this is by making positive statements. Another way of doing this is by pushing oneself to take risks, despite the chance of making mistakes. The last strategy in this set is rewarding yourself.

The third strategy set is taking your emotional temperature by listening to your body, using a checklist of feelings, writing a language learning diary, and discussing your feelings with someone else.

Social strategies are further subdivided into asking questions, either asking for clarification or verification, co-operating with others, either peers or proficient users of the new language, and empathising with others by developing cultural understanding and becoming aware of others' thoughts and feelings.

2.1.5 Summary

The classification scheme developed by O'Malley, Chamot, and their colleagues is complemented by the social and affective strategy sets of Oxford's classification scheme. Researchers have found that more effective language learners use more and a greater variety of strategies, and use them more

effectively. The following section will review LLS research involving listening comprehension.

2.2 Listening comprehension strategy research

Murphy (1985) attempted to identify listening comprehension strategies of effective and less effective listeners. Murphy asked college ESL students to listen to a recorded academic lecture, to indicate when they wanted to stop the tape, and then to think aloud (and write if they wanted), summarising what the speaker said, including anything they were thinking. This was audiotaped and transcribed, and transcripts were analysed for type and frequency of strategy use. Effective listeners used more strategies and a greater variety of strategies.

The listening comprehension strategy use of effective and less effective language learners was also investigated in the longitudinal study by Chamot *et al.* (1988a). It is important to note that these students had been designated effective or less effective language learners by their teachers. Because effective language learners were not operationally defined, there is no way of knowing if these students were successful listeners. High school Spanish and university-level Russian students took part in a think-aloud procedure. It was found that effective Spanish students used the strategies selective attention, self-evaluation, note-taking, and elaboration more. There was no quantitative difference in the use of inferencing and monitoring, but effective learners were more persistent and purposeful in their use of them. Problem identification was an important strategy for effective Russian students. They used comprehension monitoring,

summarisation, inferencing, and elaboration more often than less effective students.

The same research team (O'Malley, Chamot, and Küpper 1989) investigated the listening comprehension strategy use of effective and less effective listeners. Eleven high school ESL students were divided into eight effective and three ineffective listeners, based on their attentiveness in class, ability to follow directions without asking for clarification, ability and willingness to comprehend the general meaning of a difficult listening passage, ability to respond appropriately in a conversation, and ability and willingness to guess at the meaning of unfamiliar words and phrases.

Each student took part in a think-aloud procedure, which was audiotaped and transcribed. Transcripts were coded for the appearance of LLSs, and the frequency of different strategies was determined.

It was found that successful listeners used selective attention, directed attention, self-monitoring, elaboration, and inferencing more often. Directed attention is defined by O'Malley and Chamot as "deciding in advance to attend in general to a learning task and to ignore relevant distractors; maintaining attention during task execution" (1990, 137).

The protocols were also analysed qualitatively. Successful listeners decided what to attend to when listening, maintained attention, and redirected it when distracted. They tended to approach texts globally, by inferring meaning from context and effective self-questioning, relating what they heard to their world knowledge and personal experience. Less successful listeners were easily

thrown off by unknown elements, segmented what they heard word by word, and made fewer connections between new information and their own lives.

Vandergrift (1992) investigated the listening comprehension strategies of high school students of core French in two phases. In the first phase, students took part in a structured interview, asking them to describe their listening comprehension techniques. Transcripts of audiotaped interviews were coded according to O'Malley and Chamot's (1990) classification scheme. A few additions and revisions were made to incorporate strategies used specifically for listening comprehension. Some definitions were refined to reflect particular features of listening comprehension strategies. Some strategies were removed because they do not pertain to listening comprehension. Building on the work of Oxford (1990), some new affective strategies were identified. The new classification scheme, developed specifically for listening comprehension strategies, is shown in its entirety in Appendix A. Only the most relevant parts of the classification scheme will be discussed here.

The first of four metacognitive strategies is 'planning,' which is defined by Vandergrift as "developing an awareness of what needs to be done to accomplish a listening task, developing an appropriate action plan and/or contingency plans to overcome difficulties that may interfere with successful completion of the task" (1992, 259). Planning is divided into the following four sub-strategies: 'advance organisation' is "clarifying the objectives of an anticipated listening task and/or proposing strategies for handling it" (Vandergrift 1992, 259). 'Directed attention' is "deciding in advance to attend in general to the

listening task and to ignore relevant distractors; maintaining attention while listening" (Vandergrift 1992, 259). 'Selective attention' is "deciding in advance to attend to specific aspects of language input or situational details that assist in understanding and/or task completion" (Vandergrift 1992, 259). 'Self-management' is "understanding the conditions that help one successfully accomplish listening tasks and arranging for the presence of those conditions" (Vandergrift 1992, 259).

The second metacognitive strategy is 'self-monitoring,' which is defined by Vandergrift as "checking, verifying, or correcting one's comprehension or performance in the course of a listening task" (1992, 259). This is divided into the following sub-strategies: 'comprehension monitoring' is "checking, verifying, or correcting one's understanding at the local level" (Vandergrift 1992, 259). 'Double-check monitoring' is "checking, verifying or correcting one's understanding across the task or during the second time through the oral text" (Vandergrift 1992, 260).

The third metacognitive strategy is 'self-evaluation,' defined by Vandergrift as "checking the outcomes of one's language performance against an internal measure of completeness and accuracy" (1992, 260). This includes the sub-strategy 'performance evaluation,' "judging one's overall execution of the task" (Vandergrift 1992, 260). The final metacognitive strategy is problem identification. Vandergrift's (1992) definition is the same as O'Malley and Chamot's (1990), as discussed above.

The cognitive strategy 'inferencing' is defined by Vandergrift as "using information from within the text or conversational context to guess the meaning of unfamiliar language items associated with a listening task, to predict outcomes, or to fill in missing information" (1992, 260). It is divided into the following sub-strategies: 'linguistic inferencing' is "using known words" (Vandergrift 1992, 260). 'Voice inferencing' is "using tone of voice" (Vandergrift 1992, 260). 'Extralinguistic inferencing' is "using background sounds and relationships between speakers in an oral text, material in the response sheet, or concrete situational referents" (Vandergrift 1992, 261).

'Elaboration' is defined by Vandergrift as "using prior knowledge from outside the text or conversational context and relating it to knowledge gained from the text or conversation in order to predict outcomes or fill in missing information" (1992, 261). It is divided into the following sub-strategies: 'world elaboration' is "using knowledge gained from experience in the world" (Vandergrift 1992, 261). 'Academic elaboration' is "using knowledge gained in academic situations" (Vandergrift 1992, 261). 'Questioning elaboration' is "using a combination of questions and world knowledge to brainstorm logical possibilities" (Vandergrift 1992, 261). 'Imagery' is "using mental or actual pictures or visuals to represent information" (Vandergrift 1992, 262).

'Summarisation' is defined by Vandergrift as "making a mental or written summary of language and information presented in a listening task" (1992, 262). 'Translation' is defined as "rendering ideas from one language to another in a relatively verbatim manner" (Vandergrift 1992, 262). 'Transfer' is "using

knowledge of one language to facilitate listening in another" (Vandergrift 1992, 262). 'Repetition' is defined as "repeating a chunk of language (a word or phrase) in the course of performing a listening task" (Vandergrift 1992, 262). 'Deduction/induction' is "consciously applying learned or self-developed rules to understand the target language" (Vandergrift 1992, 263). The last cognitive strategy is 'substitution,' "selecting alternative approaches, revised plans, or different words or phrases to accomplish a listening task" (Vandergrift 1992, 263).

The socio-affective strategy 'self-encouragement' is defined by Vandergrift as "providing personal motivation through positive self-talk and/or arranging for rewards for oneself during a listening activity or upon its completion (1992, 263). 'Questioning for clarification,' another socio-affective strategy, includes asking questions to oneself.

Of the total number of strategies reported by each student in the first phase of Vandergrift's study, the largest percentage was cognitive. Metacognitive strategies were reported more frequently and in more effective combinations by successful listeners.

In the second phase, based on LLS use (frequency, variety, and sophistication) and consultation with teachers, ten successful and eleven less successful listeners were chosen to participate in a think-aloud procedure. Again, cognitive strategies were reported most frequently by all students, followed by metacognitive strategies. The nature of the think-aloud procedure is not conducive to eliciting the report of socio-affective strategies, so these strategies

were reported as less than one per cent of total strategy use. Of the cognitive strategies, summarisation, inferencing, and elaboration were reported particularly often by all listeners. Successful listeners reported twice as many metacognitive strategies as less successful listeners, in particular comprehension monitoring and problem identification. Differences in reported cognitive strategy use are not as great, but less successful listeners reported using transfer almost twice as often as successful listeners. Vandergrift points out that a purely quantitative analysis cannot show how a strategy is used, or in combination with which other strategies, or if a strategy is even used effectively.

In summary, listening comprehension strategy research has found that more successful listeners tend to report using metacognitive strategies more frequently than less successful listeners do, especially selective attention, directed attention, self-monitoring, and self-evaluation. Cognitive strategies that more successful listeners report using more are inferencing, elaboration, and note-taking. Socio-affective strategies have not been reported much by students, probably only because the nature of the think-aloud procedure used in almost all of these studies is not conducive to eliciting the report of these strategies.

2.3 Language learning strategy research in Germany

Ute Rampillon (1995), a pioneer in LLS research in Germany, distinguishes between language learning strategies and language learning techniques. Techniques are defined as methods that are initiated by students and are used intentionally and systematically, in order to direct and control language learning (Rampillon 1995:14). Because the use of single techniques is usually not

enough, and they must be combined with other techniques, language learning strategies are developed. Strategies are defined as a sequence of operations where different techniques work together to synergistically promote language learning (Rampillon 1995: 15).

2.4 Language learning strategy instruction

The research reviewed so far has sought to identify, describe, and classify the strategies used by language learners and compare the strategy use of successful and less successful learners. The question then arises if learners can be taught to use strategies more effectively to become more proficient in the target language. The following section starts by reviewing studies investigating the effect of LLS instruction on language proficiency and strategy use. This review will be followed with a discussion of how to teach LLSs.

2.4.1 The effect of language learning strategy instruction on language proficiency and strategy use

O'Malley *et al.* (1985b) sought to determine whether LLS instruction in a classroom setting would result in improved language learning for ESL students. Seventy-five high school students were each assigned to one of three groups. The metacognitive group received instruction in metacognitive, cognitive, and socio-affective strategies combined with learning vocabulary, listening tasks, and speaking tasks. The cognitive group received instruction in only cognitive and metacognitive strategies. The control group received no LLS instruction. Instruction was conducted by the researcher, not the regular classroom teachers. Pre-tests were administered before the strategy training and post-tests eight days later, after the completion of strategy instruction. Differences between the three

groups were statistically significant on the post-test of speaking, with the metacognitive group scoring highest and the control group scoring lowest. Differences between the three groups were not statistically significant on the post-tests of listening and vocabulary.

Rubin, Quinn, and Enos (1988) investigated the effect of LLS instruction on listening comprehension. A group of high school Spanish students was divided into three experimental groups and two control groups. The experimental groups received different types of LLS instruction integrated into listening comprehension instruction. In the blind condition, students were not given the names or told about the usefulness of the strategies. In the informed condition, students were given the names and told about the usefulness of the strategies. In the self-control condition, students were given the names and told about of the usefulness of the strategies, and given an opportunity to compare their usefulness with different kinds of texts and tasks. The first control group received no LLS instruction. The second control group received no listening comprehension instruction at all. Pre- and post-tests were administered, as well as daily tests. There was no significant difference between groups according to the pre- and post-tests, but the experimental groups outperformed the control groups on one day. The researchers attributed this to the fact that on that day, students viewed the hardest video, which gave students in the experimental group the edge.

Prokop (1989) investigated the effect of LLS instruction on university students learning German. Students were assigned to an experimental or a control group. The experimental group attended LLS lessons as a group and received

individual LLS tutorials. The control group also attended lessons and received individual tutorials, but these involved only language practice, not explicit LLS instruction. To measure their LLS use, both groups filled out a LLS questionnaire before and after the treatment. Students' marks on common exams were used to measure their achievement. The marks of students from the experimental group did not decrease as much as those from the control over the experimental period, as is usually the case over the course of a semester. Both groups reported positive changes in strategy use, and these changes seem to have been enhanced by LLS instruction. The LLS instruction was rated by students as slightly more helpful than the language practice alone.

Thompson and Rubin (1996) investigated the effect of LLS instruction on college students of intermediate Russian. The students were divided into an experimental group and a control group. One of the researchers, who was extensively experienced in LLS instruction, taught the experimental group. Both classes viewed the same videos in the same sequence and spent approximately the same amount of time on each of the video segments. Different lessons were planned for each section. Those for the experimental group focused on developing LLS strategies, and those for the control concentrated on using the content of the videos as a basis for speaking and writing activities. The experimental group improved significantly over the control on a test of video comprehension, but not audio. This was explained by the fact that the video instruction did not parallel the audio test.

Dadour and Robbins (1996) investigated the effect of LLS instruction on speaking. 122 first and fourth- year English students at an Egyptian university were divided into an experimental group and a control group. The treatment consisted of 15 weekly three-hour sessions of instruction on using LLSs to improve speaking skills. The experimental group outperformed the control group in speaking, except for pronunciation, and was found to use more strategies in all of Oxford's six categories.

The next study (Cohen 1998) involved 55 college students of intermediate French and Norwegian. 32 were assigned to an experimental group and 23 to a comparison group. The treatment consisted of LLS instruction for ten weeks. A Speaking Task Battery, designed for the study, consisting of three speaking tasks, was completed on a pre-test/post-test basis to determine if there were gains in speaking ability. These task were then rated by native speakers. Following the completion of each of the tasks, students completed corresponding strategy checklists. They indicated on a five-point scale the extent to which they used each strategy. A sub-sample of 21 students from both groups, representing different proficiencies, were asked to give reasons for their frequency-of-use ratings by providing a verbal report while completing them. The experimental group outperformed the comparison group on one of the three speaking tasks, using their own vocabulary and words from a list to describe their favourite city. The relationship between reported frequency of strategy use and ratings of task performance was complex. An increase in the use of certain strategies was linked

to an improvement in task performance for the experimental group, in other instances only for the comparison group, and in some cases for both groups.

In summary, all of these studies suggest that there is a relationship between LLS instruction and improved language learning. Although the results do not support this association very strongly, they agree with the increasingly common belief among language teachers that learning strategies are a valuable part of instruction.

2.4.2 The teaching of language learning strategies

Because of this belief among language teachers, there is a relatively large amount of pedagogical literature devoted to the teaching of LLSs. The more an instructor knows about LLSs, the better they will be at teaching them, but one does not need to be an expert to teach LLSs. Means of expanding knowledge of LLSs include reading articles and books, attending professional conferences, and attending in-services. Rebecca Oxford's book, *Language Learning Strategies: What Every Teacher Should Know* (1990) is especially valuable for language instructors. It is relatively accessible, suggests applications for each LLS, includes surveys for assessing students' LLSs, and includes many ready-to-use-or-adapt exercises.

Although it is possible to learn LLSs implicitly, most LLS experts advocate explicit instruction (Oxford 1989, 1990, 1993; Wenden 1991; Weaver and Cohen 1994). Explicit instruction involves discussing the value and purpose of using LLSs. In a study in a non-language learning setting, Brown *et al.* (1983) found that students taking part in explicit learning strategy instruction used

learned strategies more frequently and effectively. Paris *et al.* (1982) found that giving students information about where and how often a strategy may be used greatly enhances the positive outcomes of learning strategy training.

O'Malley and Chamot (1990) note a basic structure common to sequence frameworks for LLS instruction. The teacher identifies or shows students how to identify their current learning strategies, explains the rationale and application for using additional strategies and provides opportunities and materials for practice, and evaluates or assists students in evaluating their degree of success with the new learning strategies.

Oxford's (1990) strategy training model follows this general pattern. It assumes that students' strategy use has been assessed. This can be done by simply observing the class, a group of students, or an individual student (or videotape of any of these), and taking notes or checking off on a list of observable LLSs. Other methods, used more often in research, are think-aloud procedures, structured interviews, and questionnaires. Students can reflect about their own LLS use in language learning diaries.

There are eight steps in Oxford's strategy training model. She points out that some of these steps can be followed at the same time or in a different order. The first step is to consider the students. Besides assessing their LLS use, their attitude should also be considered. If they do not accept responsibility for their learning, they will need help changing their attitude.

The second step is to select the strategies. When doing so, teachers should consider the results of the strategy assessment. They should beware of biases

against certain types of strategies that their students might appear to have. It might not be worthwhile to teach strategies that completely contradict what students are already doing. If a strategy that contradicts what students are already doing is particularly useful, then it needs to be introduced gradually. It is easier to build on what the students prefer. Most obviously, a picture of students' strategy use will reveal any significant gaps that could be filled through strategy instruction.

Of course, students in most classes will be as varied as the strategies themselves; therefore, it is only possible to select strategies that are generally useful for most learners and transferable to a variety of language situations and tasks. Teachers should select strategies that support each other (Oxford 1993). This means selecting metacognitive, cognitive, and socio-affective strategies. Cohen (1998) suggests starting with a broad focus, as long as students are not overwhelmed, and encouraging them to experiment with a broad range of strategies. The students then have the opportunity to narrow the focus of the instruction.

The third step is to consider integration of strategy training. There are some situations in which a separate course focussing on LLSs would be more appropriate, but generally, learning in context is considered to be more effective (Oxford 1993, Weaver and Cohen 1994, Cohen 1995a). If the LLSs are integrated into to language learning tasks, learners are more likely to appreciate its relevance (Wenden 1987).

The fourth step is to consider motivational issues. Ideally, the implicit motivation of becoming a better language learner would be enough for students to learn LLSs. Unfortunately, most students that will be motivated by this are only those that are already highly motivated to learn the language. In order to benefit more students, teachers might like to consider some form of explicit motivation, such as bonus marks.

Assuming that teachers have conducted some sort of LLS assessment, students' interest in LLSs might be heightened. Teachers should explain that LLS make language learning easier, and tell students what benefits they can expect from using LLSs (O'Malley and Chamot 1990), so that students become convinced of their own potential success (Wenden 1987, Paris 1988). According to Jones et al. (1987), a major objective of strategy training should be to change students' attitudes about their own abilities by "teaching them that their failures can be attributed to the lack of effective strategies" (560). It follows from this that students can take responsibility for and control their degree of success by changing their learning behaviours. If students believe that they can do this, they will be much more motivated than if they attribute their success or failure to external factors over which they have no control.

A simple means of increasing student motivation is to allow student input into the instruction (Cohen 1998). Oxford's strategy training model integrates Paris' (1988) four instructional techniques that integrate motivational and cognitive strategy instruction: modelling, direct explanation, scaffolding instruction, and co-operative learning.

The fifth step is to prepare the materials and activities. Instructors can continue to use almost all of the same materials that they already use. LLSs are embedded into many language learning materials, but this is not necessary for materials to be used in LLS instruction. Instructors can develop handouts or handbooks. One way of encouraging student input is for students to develop their own handbooks as they learn strategies that work for them.

The sixth step is to conduct the LLS instruction. Before receiving any instruction about the target strategies, students could complete a language learning task and discuss which strategies they used spontaneously. Students could also discuss how they would normally complete the task without actually completing it (O'Malley and Chamot 1990; Cohen 1995a, 1998).

Next, instructors should explain and demonstrate the strategy. A direct explanation of the strategy should include why, when, and how to use it. The explanation could build on what students have just discussed and show how they might improve their strategy use. Teachers could model the strategies, e.g., by thinking aloud about the goals and the mental processes involved (Paris 1988, Cohen 1998).

Following this, students should have the opportunity to apply the strategies to the same or a similar task. Students should have ample opportunity to practice with a variety of tasks involving authentic materials (Oxford 1993). Where appropriate, this practice should take place in the context of co-operative learning, where heterogeneous student teams work together to solve a problem or

complete a task (Paris 1988). In pairs, one student could complete the task while the other prompts use of the strategies.

Teachers should provide 'scaffolding,' a Vygotskian concept referring to the temporary support provided to students as they try out the new strategies (Paris 1988). This is especially important for the difficult yet crucial transfer of strategies to new contexts (Oxford 1993). Scaffolding should be complemented by fading, as reminders to use particular LLS are gradually taken away, allowing learners to choose their own most effective strategies. Throughout the instruction, instructors should monitor and teach students to monitor the instruction. As the students practice, instructors should give feedback about their performance for them to estimate the strategies' effectiveness and experience their professed value (Wenden 1987).

The seventh step is to evaluate the instruction. Teachers should evaluate or help students to evaluate their degree of success with the new learning strategies (O'Malley and Chamot 1990). Learners can help teachers evaluate the success of the training and the value of the strategies in multiple tasks. This provides practice with the strategies self-monitoring and self-evaluation. It raises learner awareness and improves motivation to continue effective strategy use (Wenden 1991). Brown and Palinscar (1982) found that learners that were trained to monitor and evaluate their use of strategies were more likely to continue using them and initiate their use in a variety of contexts than those that were not.

The instruction can be evaluated by a number of criteria (Wenden 1987). The most obvious of these are task improvement and strategy use. Another

criterion is maintenance, i.e., for how long do students continue to use the strategies following the completion of the instruction. Still another criterion is transfer, i.e., do students apply the strategies to language tasks and skills other than those practised as part of the instruction. One other question for teachers to consider when estimating the effectiveness of the LLS instruction is if students' attitudes towards language learning have changed. It is an important goal of LLS instruction to foster autonomous learning.

The eighth step is to revise the instruction based on the evaluation. An assessment of students' strategy use to evaluate the instruction leads back to the beginning of the cycle.

By following these suggestions, language instructors can start integrating LLSs into their own instruction. The following section includes more specific suggestions and activities for listening comprehension.

2.4.3 Listening comprehension strategy instruction

Mendelsohn (1994) provides many suggestions for teaching listening comprehension strategies. Some students lack the background or world knowledge that they could use for elaboration. Mendelsohn suggests teaching (if no students possess this knowledge) or pooling this information before listening, e.g., by a general discussion of the topic, or a discussion of the title and visuals.

To enable students to make more inferences, he also suggests identifying the speakers and relationship between them. In order that students make more inferences, Mendelsohn suggests creating a supportive classroom atmosphere that is conducive to guessing. In many cases, it is necessary to convince students that

it is often appropriate to guess. This can be done by drawing to their attention the fact that they guess in their first language. They should also find that they are usually right, but that they may have to modify their hypotheses.

Mendelsohn suggests some activities to help students practise guessing. The first of these is to listen to half of a text and then to stop the tape. Students then discuss their predictions of what they will hear in the rest of the text and their reasons for them. After listening to the rest of the text, students check their predictions. Oxford (1990) suggests that students listen to the end of a text and guess what they would have heard and discuss their reasons. Another activity that Oxford suggests is for students to finish others' sentences. A similar activity suggested by Mendelsohn is for students to finish utterances following conjunctions, such as, "I was planning on riding my bike today, but –." It would be easier to start with conjunctions that can be followed by fewer options and continue with examples that allow an increasing number of options. Students might be surprised by how often they can guess correctly in their second language, and should realise that it is not so bad if they guess incorrectly. Another activity is for students to listen to utterances with words that have been made inaudible. Students then discuss what the words could have been and why.

2.5 Concluding comments

Having reviewed what is known about LLS instruction, this chapter will conclude with a review of the research questions posed in Chapter I. The present study hopes to provide empirical support for learning strategy instruction in the foreign language classroom by seeking to answer the following questions:

1. Does explicit LLS instruction integrated into listening comprehension tasks increase students' listening comprehension proficiency? It is expected that LLS instruction will increase students' listening comprehension proficiency.
2. Does explicit LLS instruction integrated into listening comprehension tasks increase students' reported listening comprehension strategy use? It is expected that LLS instruction will increase students' reported strategy use.
3. Does explicit LLS instruction integrated into listening comprehension tasks help students use strategies more effectively? It is expected that LLS instruction will help students to use strategies more effectively.

The next chapter will describe the methods used to investigate the effect of LLS instruction.

Chapter III

Methods

3.0 Overview

This chapter will describe the participants, the research procedures, the data collection materials, instruments and procedures, and the data analysis. To investigate listening comprehension strategy use, a think-aloud procedure was used. Guidelines for using verbal report data will be discussed before describing the study itself.

3.1 Issues in methodology

Garner (1988) suggests guidelines to enhance the reliability and validity of using verbal report data. Vandergrift (1992) used these guidelines to refine his research procedures. The measures that he took were also taken in this study. So that responses will be more accurate and will not diminish processing capacity, Garner suggests tapping information available in short-term memory. The "on-line" nature of the think-aloud procedure does this. Garner's second guideline is to minimise disruption by using unobtrusive introspection methods and infrequent interruptions. The listening texts included pauses at natural discourse boundaries to allow students to think aloud without being interrupted. Garner's third guideline is to ask participants to report on specific events, not hypothetical situations. In a think-aloud procedure, respondents report what they are thinking as they complete a real task. Garner's fourth guideline is to ask participants what they do and think, not why. Students were instructed to say what they were thinking, not why. Garner's fifth guideline is to recognise that verbal reports may

contain useful information, even if they are incomplete. This fact has been acknowledged in Chapter I under Limitations. Garner's sixth guideline is to prompt reporting in a non-cueing manner. If students were prompted, it was done so in a non-cueing manner, as discussed below. Garner's last guideline for enhancing the reliability and validity of using verbal report data is to use multi-method assessment to collect convergent data. In this study, two different methodologies were used.

3.2 Recruitment of participants

Permission was obtained from the Faculty of Art Ethics Review Board at the University of Alberta to carry out this study. Participants were recruited from two sections of Beginners' German, one of which was taught by the researcher. The investigator explained the study during his class and during a visit to the other instructor's class, and all students were invited to participate. Students were given an introductory letter, further explaining the study and inviting students to participate, and a consent form (see Appendices B and C). Participation was strictly voluntary. One student from the other instructor's section declined to participate; all other students agreed to be part of the study.

3.3 Phase I

3.3.1 Participants

A total of 34 students participated in the first phase of the study: 20 from the researcher's section and 14 from the other instructor's section. Students in the researcher's section served as the experimental group and those in the other section served as the comparison group. To determine their listening

comprehension proficiency after nine weeks of German instruction[2], students the completed the listening comprehension portion of the University of Wisconsin College-Level Placement Test in German. An independent groups *t* test was used to determine if the groups were similar enough to proceed. The test revealed that the experimental group (M = 19.35, SD = 4.815) did not differ from the control group (M = 16.71, SD = 3.539), t (32) = 1.742, p = .091.

3.3.2 Instruments and procedures

3.3.2.1 Treatment

During the eleven-week treatment period, each class had six 50-minute lessons devoted to listening comprehension. Both classes used the texts and corresponding tasks from the common textbook. The experimental group received explicit LLS instruction integrated into these lessons following Oxford's (1990) strategy training model. This model and other suggestions that were incorporated into the instruction are summarised in the section on how to teach LLSs (p. 28).

An exception to this is that this model assumes that students' strategy use has been assessed. The results of the strategy assessment can be considered when selecting the strategies to be taught. In the present study, the strategies to be taught had already been selected before the strategy assessment took place. Although strategies of a variety of types that complemented each other well were selected, their selection was based largely on strategies that have been reported by successful listeners in the literature: advance organisation, directed attention, selective attention, problem identification, linguistic and voice inferencing,

[2] Lessons were 50 minutes long, five times per week.

elaboration, and self-encouragement. To control for informal contact between students from both groups, Manfred Prokop (personal communication) suggested that the students be instructed not to discuss the listening comprehension lessons with anyone outside of the class.

3.3.2.2 Instruments

To determine their listening comprehension proficiency after the treatment, students completed the listening comprehension portion of the University of Wisconsin College-Level Placement Test in German again after 20 weeks of instruction. The following examples illustrate the kinds of tasks included in the test:

1. Listen to the following exchange and indicate which of the three statements printed below best continues the ideas in that exchange.

Tape:
Speaker *Können Sie mir die neue Adresse von Frau Dr. Steigleder geben?*
'Could you please give me Dr. Steigleder's new address?'

a. I read that in the paper.
b. No, I don't have it myself.
c. I haven't written him yet.

2. Listen to the following text and answer the questions below.

Tape:
Speaker (male voice) *Schlagt eure Bücher auf Seite 70 auf! Hans, was machst du da?*
'Open your books to page 70! Hans, what are you doing there?'

Speaker (younger male voice) *Ich mache mein Buch auf, wie die anderen!*
'I'm opening my book, like the others.'

Speaker *Gut, in Ordnung. Lies den ersten Satz!*
'Alright. Read the first sentence!'

Speaker *Heute gehen wir zum Park.*
'Today we're going to the park.'

Speaker *Nein, nein, nicht den Satz. Christa, lies den ersten Satz auf Seite 70, bitte!*
'No, no, not *that* sentence. Christa, read the first sentence on page 70, please!'

Speaker (female voice) *Alle waren traurig, weil es geregnet hat.*
'Everyone was sad, because it rained.'

1. Where does the conversation take place?
   a. in a restaurant
   b. in the park
   c. in a classroom
2. The girl reads the sentence because the boy
   a. has forgotten his book.
   b. writes on the board.
   c. turns to the wrong page.

After each administration of this test, each student filled out a listening questionnaire developed by Laurens Vandergrift (personal communication). The questionnaire consisted of statements describing listening comprehension strategies followed by numbers one to five, strongly disagree to strongly agree (see Appendix D). Students were asked to indicate their level of agreement by circling the appropriate number.

Responses to all items on the questionnaire except for distractors were averaged, resulting in the measure *reported listening comprehension strategy use*. Cronbach alphas were .6633 and .6754 for the pre- and post-treatment administrations of the questionnaire, respectively, indicating that the scale had acceptable internal consistency, considering that this is the first time that a questionnaire has been used to measure listening comprehension strategy use. Scale means were 62.6785 (SD = 5.5526) and 65.1364 (SD = 5.0114) for the pre- and post-treatment administrations of the questionnaire, respectively. After the

first administration of the test and questionnaire, each student filled out another questionnaire, including information such as their sex, age, language learning background, and motivation for learning German.

Student feedback was collected to evaluate each listening comprehension lesson and the course in general. To evaluate the LLS instruction, an 'exit card survey,' a method suggested by Olenka Bilash (personal communication), was used. At the end of class, students write on an index card what they thought of that day's class and why, and hand the card to their teacher as they leave the class. To evaluate the course in general, feedback was collected at the end of the first semester, half way through the study. One of the questions that students were asked was what they liked about the course so far.

3.4 Phase II

3.4.1 Participants

Based on the results of the listening comprehension test, four successful listeners and two less successful listeners from the experimental group were chosen to invite to participate in a think-aloud procedure. Most students from the comparison group were invited. As Vandergrift (personal communication) suggested, only students that, their instructors expected, would talk a lot without prompting were invited to participate. Students were invited via e-mail. All students from the experimental group that were invited, and three successful listeners from the comparison group agreed to participate.

3.4.2 Materials and procedures

The think-aloud procedure, adapted from Vandergrift (1992), had two separate phases: a training phase and a data collection phase, each lasting about 30 minutes. With the exception of the data collection phase for one student (which took place in the investigator's office), this took place in the Applied Linguistics Lab at the University of Alberta.

3.4.2.1 Training phase

This phase of the procedure began with an explanation of the purpose of the study. Students were told that the purpose of this study of listening comprehension was to help language teachers help their students become better language learners. The importance of their participation in the study was stressed, especially their participation in the think-aloud procedure. Students were told that there were no correct answers and were asked to answer honestly and completely. Thinking aloud was described and demonstrated using a math problem from *The Puzzle Book* (World Book, Inc., 1982). Students then chose another problem and practised thinking aloud as they solved it. Thinking aloud was demonstrated using a text similar to those used for the data collection as described below. Students were given a handout (see Appendix E) to remind them that to think aloud means to say everything that comes to mind. They were told that it might help to pretend that they were alone, talking to themselves. They were asked how they were making sense of what they were hearing, how they were dealing with unfamiliar words, what they were not understanding, how they figured it out when they did understand, what pictures or memories came to mind, and what they

were thinking. Students then practised thinking aloud as they listened to the same text and two similar ones.

3.4.2.2 Data collection materials

Texts were chosen that were at a difficulty level such that they would draw out LLSs that had become automatic but become conscious when there is sufficient but not too much challenge. Texts were taken from *Kreise* (Arendt *et al.* 1992, p. 28, 160) and *Treffpunkt Deutsch* (Widmaier and Widmaier 1999, p. 241). Transcripts of the texts are included in Appendix F.

Three dialogues were recorded on a cassette tape with pauses at natural discourse boundaries, as confirmed by a native speaker of German. This tape was used to pilot the think-aloud procedure with one successful and one less successful listener from the experimental group. Because the texts seemed to be neither too easy nor too difficult, no changes were made to the tape, and the data collected from these two listeners were included with those from the other listeners.

3.4.2.3 Data collection procedures

Data collection sessions took place within one week of the respective training sessions, after 20 weeks of instruction. All sessions were audiotaped. Students started by practising thinking aloud using the materials from the training session, until they were satisfied that their reports accurately reflected the completeness of their thoughts. Students made the transition to making a verbal report by completing a trial run with the first text on the tape. This was not recorded, and the participants were coached on verbalising. Students then made

their verbal report, which was audiotaped. The texts were stopped at the predetermined pauses, at which point students attempted to verbalise their thoughts. If they were unsure, the researcher limited himself to non-cueing probes, such as, "What are you thinking now? What didn't you understand? How did you figure that out? What's going on in the back of your mind? Can you be more specific?" In doing so, he was careful not to suggest any LLSs to the students. The data collection sessions were transcribed verbatim.

3.4.2.4 Data analysis

The transcripts of the think-aloud sessions were analysed using Vandergrift's (1992) listening strategy classification scheme, summarised in Appendix A. One effective listener from the experimental group was not included in the analysis, because she attended only two of the six listening comprehension lessons.

Each incidence of strategy use was noted on the transcript. For each student, the number of occurrences of each strategy was counted and combined by strategy type and total strategy use, resulting in a LLS profile. Profiles of an effective and an ineffective listener are included in Appendix G.

3.5 Conclusion

This chapter has described the methods used to investigate the research questions posed in Chapter I. Methodological issues were addressed and the participant sample, instruments, and procedures were described. The next chapter will present the results of the quantitative and qualitative analyses of the data.

Chapter IV

Results

4.0 Overview

The purpose of this study was to investigate the effect of LLS instruction on students' listening comprehension proficiency, students' frequency of reported listening comprehension strategy use, and the effectiveness of students' listening comprehension strategy use. This chapter will present the results of the analyses used to examine the data gathered in each phase of the study.

4.1 Phase I

4.1.1 Purpose of Phase I

In this phase students from the experimental and comparison groups completed a listening comprehension proficiency test and listening questionnaire on a pre-/post-treatment basis. The treatment consisted of LLS instruction. Students from the experimental group provided feedback about the LLS instruction. This phase sought to evaluate LLS instruction by investigating the first two research questions.

4.1.2 Findings of Phase I

4.1.2.1 Listening comprehension proficiency

The first hypothesis predicts that listening comprehension strategy instruction increases students' listening comprehension proficiency. To determine students' listening comprehension proficiency before and after the treatment, students completed the listening comprehension portion of the University of Wisconsin College-Level Placement Test of German on a pre-test

post-test basis. The means and standard deviations of the listening comprehension proficiency test scores out of a possible 35 for students from the experimental and comparison groups are summarised in Table 2.

Table 2

Test of Listening Proficiency	Group	Mean	Standard Deviation	N
Pre-treatment	Experimental	19.35	4.82	20
	Comparison	16.71	3.54	14
Post-treatment	Experimental	21.25	5.20	20
	Comparison	20.79	3.64	14

The listening comprehension proficiency of the students that took part in LLS instruction did not increase more that that of the students in the comparison group did. Students in the experimental group scored an average of 19.35 and 21.25 on the pre- and post-tests of listening comprehension proficiency, respectively, an increase of 1.9. Students in the comparison group scored an average of 16.71 and 20.79 on the pre- and post-tests of listening comprehension proficiency, respectively, and increase of 4.08.

To evaluate the first hypothesis, a repeated measures ANOVA was conducted. Results indicated that the interaction effect between time and group was not significant ($F(1, 32) = 2.585$, $p = .118$). LLS instruction did not appear to increase students' listening comprehension proficiency. Results also indicated that the main between-group effect of group was not significant ($F(1, 32) =$

1.207, p = .280). The experimental and control groups did not appear to score differentially on the test. However, the within-group effect of time was significant (F (1,32) = 19.547, p = .0005). Both groups improved their scores over time. The results of the ANOVA are summarised in Table 3.

Table 3

Source (of variation)/ Effect	Mean Square	Degrees of freedom	F	p
Time	146.827	1	19.547	.0005*
Group	39.571	1	1.207	.280
Time x Group	19.415	1	2.585	.118

*significant at .05

4.1.2.2 Listening comprehension strategy use

The second hypothesis predicts that LLS instruction increases students' reported listening comprehension strategy use. To determine students' reported listening comprehension strategy use before and after the treatment, students completed Vandergrift's listening questionnaire. All questionnaire items, including those corresponding to metacognitive, cognitive, and socio-affective strategies were put together in one scale, *reported listening comprehension strategy use*. The mean and standard deviation of the *reported listening comprehension strategy use* scores are summarised in Table 4.

Table 4

Reported listening strategy use	Group	Mean	Standard Deviation	N
Pre-treatment	Experimental	63.50	6.30	20
	Comparison	61.77	4.27	13
Post-treatment	Experimental	66.08	5.34	20
	Comparison	63.69	4.25	13

Because one student from the comparison group did not respond to two items on the questionnaire, his results were not included in the analysis. The students that took part in LLS instruction reported more of an increase in listening comprehension strategy use than the students in the comparison group did. Students in the experimental group reported average scores of 63.50 and 66.08 on the pre- and post-treatment administrations of the questionnaire, respectively, an increase of 2.58. Students in the comparison group reported average scores of 61.77 and 63.69 on the pre- and post-treatments of the questionnaire, respectively, an increase of 1.92.

To evaluate the second hypothesis, a repeated measures ANOVA was conducted. Results indicated that the interaction effect between time and group was not significant ($F(1, 31) = .102$, $p = .751$). LLS instruction appeared to increase students' listening comprehension strategy use, but not significantly more than listening comprehension instruction without LLSs. Results also indicated that the main between-group effect of group was not significant (F (1,

31) = 1.691, p = .203). The experimental and control groups did not appear to report listening comprehension strategies differentially. However, the within-group effect of time was significant (F (1.31) = 4.861, p = .035). Both groups reported an increase in the use of listening strategies over time. The results of the ANOVA are summarised in Table 5.

Table 5

Source (of variation)/ Effect	Mean Square	Degrees of freedom	F	p
Time	79.705	1	4.861	.035*
Group	66.657	1	1.691	.203
Time x Group	1.674	1	.102	.751

*significant at .05

4.1.2.3 Student feedback

Feedback from students in the experimental group was collected to evaluate listening comprehension lessons and the course in general. To evaluate the LLS instruction, an exit card survey was used. At the end of each listening comprehension lesson, students wrote on an index card what they thought about that lesson and why.

Feedback from the first two lessons was particularly positive. All seventeen students that were present for the first lesson made positive comments. Four students wrote that they found the strategies helpful; three wrote that they found the class interesting. Even more interestingly, two students wrote that they had been aware of or thinking about strategies, and that it was good to use them consciously. One of these students wrote that talking about strategies made them more confident. One student wrote that the class was rewarding and encouraging.

Of the fifteen students present for the second lesson, all but two made positive comments. Of these thirteen, another six said that they found the strategies helpful. One student felt as if they had already improved, and another student commented that the class was interesting and productive.

To evaluate the course in general, feedback was collected at the end of the first semester, halfway through the treatment. One of the questions that students were asked was what they really liked about the course. Of the twenty students that provided feedback, two mentioned the LLS instruction, of all the things in the course, as something that they really liked.

4.1.3 Summary of Phase I

In Phase I, students completed a listening comprehension proficiency test and listening strategies questionnaire on a pre-/post-treatment basis and provided feedback about the LLS instruction. The results, as presented above, are mixed in terms of the value of LLS instruction. In response to the first two research questions, the results do not show that LLS instruction increases listening comprehension proficiency or the frequency of reported listening comprehension strategy use. This seemingly negative evaluation of LLS instruction is contrasted by the overwhelmingly positive evaluation by the students themselves, who found the strategies helpful.

4.2 Phase II

4.2.1 Purpose of Phase II

The data collection procedures in this phase directly investigated students while they were listening to German texts. Students took part in a think-aloud

procedure, verbalising their thought processes. The think-aloud sessions were audiotaped and transcribed verbatim. Each incidence of strategy use was noted on the resulting transcripts, and the number of occurrences of each strategy was counted for each student and combined by strategy type and by total number of strategies, resulting in a LLS profile for each student. Transcripts were also analysed qualitatively by comparing transcripts of students from the experimental and comparison groups. The quantitative and qualitative analysis of this phase sought to answer the second and third research questions, respectively.

4.2.2 Findings of Phase II

4.2.2.1 Quantitative analysis

4.2.2.1.1 Sample LLS profiles

Appendix G contains the LLS profiles of Frauke and Heidrun, an effective and an ineffective listener, respectively. Frauke scored 33 out of a possible 35 on the post-test of listening comprehension proficiency compared to Heidrun's 18. A comparison of parts of their profiles should help start to translate the reported frequencies of strategy use into a picture of effective and ineffective listening behaviours.

Frauke reported using strategies more frequently, 50 times compared to Heidrun's 34. Surprisingly, Frauke and Heidrun reported the same frequency of metacognitive strategies, six. One of Frauke's metacognitive strategies was double-check monitoring, which the less effective listener did not use. The remainder of the metacognitive strategies were problem identification. It is not

surprising that Heidrun reported this strategy as often as she did, because she encountered many problems.

Frauke reported using cognitive strategies more frequently, 38 times compared to Heidrun's 27. The more effective listener reported using inferencing more frequently, ten times compared to six. This difference could be due to a greater willingness to guess. Each listener reported voice inferencing once. Frauke reported linguistic inferencing nine times compared to Heidrun's five. This could have been because Frauke likely possessed more linguistic knowledge than Heidrun, enabling her to use this strategy more frequently. Frauke reported using elaboration twice as often as Heidrun, eight times compared to four. The more effective listener seems to have been more willing to connect knowledge from outside of the text with that within the text.

Now that reported frequencies of strategy use can be used to form a clearer picture of effective and ineffective listening behaviours, the quantitative data will be compared by group.

4.2.2.1.2 Comparison by group

The questionnaire results are complemented by the data from the think-aloud procedure, which is closest to the actual listening event. Too few students took part in the second phase to conduct a *t*-test, so the quantitative analysis of the think-aloud data was restricted to descriptive statistics. The mean and standard deviation of use of each strategy, use of each strategy type, and total strategy use during the think-aloud procedure by effective listeners (those scoring 19 or more

out of a possible 35 on the post-test of listening comprehension proficiency) in the experimental and comparison groups are summarised in Table 6.

Table 6

Group	Experimental (N = 4)		Comparison (N = 3)	
	Mean	Standard Deviation	Mean	Standard Deviation
Double-check monitoring	1.00	.00	1.00	1.73
Performance evaluation	.00	.00	.33	.58
Problem identification	4.75	2.06	8.33	2.52
TOTAL METACOGNITIVE	**5.75**	**2.06**	**9.67**	**3.21**
Linguistic inferencing	6.00	3.16	4.00	2.00
Voice inferencing	.25	.50	.33	.58
Extra-linguistic inferencing	.50	.58	.67	.58
Total Inferencing	**6.75**	**3.59**	**5.00**	**3.00**
World elaboration	4.00	2.16	4.33	1.53
Academic elaboration	.50	1.00	.33	.58
Questioning elaboration	1.25	.50	1.33	1.53
Imagery	.25	.50	.00	.00
Total Elaboration	**6.00**	**2.45**	**6.00**	**2.65**
Summarisation	15.75	.50	15.00	1.73
Substitution	2.25	1.50	2.67	3.79
Transfer	.25	.50	.67	.58
Translation	.00	.00	.33	.58
Repetition	.00	.00	.67	.58
Deduction/ Induction	.00	.00	.67	.58
TOTAL COGNITIVE	**31.00**	**6.27**	**31.00**	**8.89**
Questioning for clarification	2.00	2.83	2.67	3.06

Self-encouragement	.25	.50	1.00	1.00
TOTAL SOCIO-AFFECTIVE	**2.25**	**2.63**	**3.67**	**2.08**
TOTAL STRATEGY USE	**39.00**	**7.75**	**44.33**	**9.07**

The students that took part in LLS instruction did not report using strategies more frequently during the think-aloud procedure than students from the comparison group did. The experimental group reported an average of 39 strategies compared to the other group's average of 44.33.

The students that took part in LLS instruction did not report using metacognitive strategies more frequently than students from the comparison group did. They reported an average of 5.75 metacognitive strategies compared to the other group's 9.67. This discrepancy is perhaps partially explained by a comparison of the frequency of reported use of individual metacognitive strategies. Students in both groups reported using double-check monitoring an average of one time. Performance evaluation was only reported once, by a student from the comparison group, resulting in an average of 0.33 for that group. Students in the experimental group reported using problem identification an average of 4.75 times compared to the comparison group's average of 8.33. Mostly because students in the comparison group reported problem identification more frequently than the experimental group did, they reported using metacognitive strategies more frequently than the experimental group.

The students that took part in LLS instruction did not report using cognitive strategies more frequently than students from the comparison group did. Students from both groups reported using an average of 31 cognitive strategies.

A comparison of cognitive strategy use by strategy type and sub-type will reveal small but significant differences in cognitive strategy use by both groups. The students from the experimental group reported using inferencing more frequently than those from the comparison group did. They reported using inferencing an average of 6.75 times, compared to the other group's average of five. This is mostly due to the fact that the students from the experimental group reported using linguistic inferencing more frequently than the comparison did (an average of six times compared to four). One student from each group reported using voice inferencing once, resulting in averages of 0.25 and 0.33 for the experimental and comparison groups, respectively. Extra-linguistic inferencing was reported twice by each group, resulting in averages of 0.50 and 0.67 for the experimental and comparison groups, respectively. Mostly because the students from the experimental group reported using linguistic inferencing more often than the comparison did, students from the experimental group reported using inferencing more often than the comparison group did.

The students from the experimental group did not report using elaboration more frequently than their peers from the comparison did. Students from both groups reported using elaboration an average of six times. World elaboration was reported slightly less frequently by the students from the experimental group than by those from the comparison (an average of four compared to 4.33 times).

Academic elaboration was used twice by the students from the experimental group compared to once by those from the comparison, resulting in averages of 0.50 and 0.33, respectively. Questioning elaboration was reported slightly less frequently by the students from the experimental group than by those from the comparison group (an average of 1.25 compared to 1.33 times). Imagery was only reported once, by a student from the experimental group, resulting in an average of 0.25 for that group.

Students reported using summarisation about once per segment, resulting in averages of 15.75 and 15 for the experimental and comparison groups, respectively. Students from both groups also reported a similar frequency of use of the strategy substitution (an average of 2.25 and 2.67 for the experimental and comparison groups, respectively).

The strategies transfer, translation, repetition, and deduction/induction were reported very seldom, if at all, by students from the experimental group, and more frequently by students from the comparison group. Of these strategies, transfer was reported once by one student from the experimental group, resulting in an average of 0.25. One student from the comparison group reported using translation once, resulting in an average of 0.33. Transfer, repetition, and deduction/induction were each reported twice by the students in the comparison group, resulting in an average of 0.67 for each student.

Students from both groups report using the same number of cognitive strategies. While the students from the experimental group report using

inferencing more often, the students from the comparison report using transfer, translation, repetition, and deduction/induction more often.

The students that took part in LLS instruction did not report using socio-affective strategies more frequently than students from the comparison group did. The students from the comparison group reported using an average of 2.25 socio-affective strategies compared to the other group's average of 3.67. The students from the experimental group did not report questioning for clarification as frequently as the comparison did. They reported using the strategy an average of two times, compared to the other group's average of 2.67. One student from the experimental group reported using self-encouragement once, resulting in an average of 0.25. The students from the comparison reported using the strategy an average of one time.

The students from the comparison group reported strategies more frequently, especially metacognitive strategies (problem identification). The students from the experimental group reported inferencing more frequently, while the students from the comparison reported transfer, translation, repetition, and deduction/induction more frequently.

It is important to note that the standard deviation for all items is generally higher for the comparison group. This is in part because Frank, one of the students in the comparison group, reported using 54 strategies, 11 more than Uwe and another seven more than Urs, the other students in the comparison group. An analysis of Frank's protocol for one of the think-aloud texts below will reveal why he reported using strategies at such a disproportionately high rate.

4.2.2.2 Qualitative analysis

A quantitative analysis of the data provides an incomplete picture of the findings. It cannot show if strategies have been used effectively, how strategies have been used, and in which combinations. For this reason, the data were analysed qualitatively. This analysis consists of a comparison of listeners from the experimental and comparison groups, for each of the three texts. Listeners of similar listening comprehension proficiency that reported using a similar number of strategies on the questionnaire and during the think-aloud procedure were chosen to be compared with each other[3].

The first comparison is of Fritz and Frank, listeners from the experimental group and the comparison group, respectively. Before the treatment, Fritz was the least proficient listener in the experimental group that took part in the think-aloud procedure. By the end of the treatment, he had become as proficient as Frank, one of the most proficient listeners in the comparison group (Both Fritz and Frank scored 24 out of a possible 35 on the post-test of listening comprehension proficiency). In other words, Fritz seems to have responded well to the treatment. According to the questionnaire, Fritz and Frank reported using listening comprehension strategies at a similar rate, with scores of 71 and 74, respectively. During the think-aloud procedure, however, Frank used 54 strategies compared to Fritz' 36. Despite the quantitative disparity of strategy use, the following analysis will reveal qualitative differences between the two listeners.

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[3] Although a qualitative analysis can investigate listening comprehension strategy use more deeply, it is narrower in scope. Due to the small number of students that took part in the think-aloud procedure, they cannot be considered representative of the entire group. A qualitative analysis is also more susceptible to researcher bias.

Tape:
Speaker: *So, wer kommt jetzt dran?*
(male voice) 'So, who's next?'

Speaker: *Ich!*
(female voice) 'I am.'

Speaker: *Ja bitte?*
'How may I help you?'

Speaker: *Ich bekomme ein Kilo Kalbsbraten.*
'I'd like a kilogram of veal roast.'

Fritz:
Uh, he asks her, 'Where you *kommen*?' Um, a measurement was given, *Kilo*. Uh, she wants a *Kilo* of something. Um, just from him asking her what she wants, it's some kind of server asking a question of some sorts.

Interviewer: And, um, how did you figure out, um, what he said to start with?

I couldn't catch – I caught the word *kommen*. Um, he addressed her, and she mentioned a *Kilo*. And, uh, just from that I'm guessing that he's asking her how much of a certain measurement she wants.

Frank:
Okay, uh, I didn't get that much from that. It uh, sounds like he asks her a question and, uh, going –

Interviewer: Sorry to interrupt. How did you figure that out?

I'm not sure. I guess it's just from the tone of voice. It sort of sounded a little bit inquisitive. Um, yeah. I guess there wasn't any really any key words that clued me in, besides -- other than the response which was, uh, her – she said, *ich* after his opening line, so it's a short report, and it just sounds like a question in the general flow. And uh, the only other thing I sort of picked up was I heard her in her last line say the word – It sounded like *ein Kilo* something, so it sounds like she's giving some sort of measurement or weight, and that's really all I could pick up from the exchange.

Although neither student starts off with an easy understanding of this segment, only Frank admits this. Fritz repeats what he thinks he has heard, seeming not to realise that it might not make any sense. He does not let this stop him, and he continues by guessing, based on the word that he understood

(linguistic inferencing), that a measurement was given. He supports this with his knowledge of transactions like the one in the text (world elaboration) to start to form a conceptual framework.

Frank starts by becoming frustrated. Based on tone of voice, he guesses that a question has been asked (voice inferencing). Frank reveals that he listens for key words. Unfortunately, he often gets caught up on words that do not help him understand, which ultimately hinders his comprehension. He picks out *ich* and *Kilo*. Although he does not seem to derive any meaning from *ich*, like Fritz, Frank also guesses that a measurement was given, based on *Kilo* (linguistic inferencing). Unlike Fritz, Frank does not connect this with his world knowledge to further develop a conceptual framework.

Tape:
Speaker: *Noch etwas?*
(male voice) 'Anything else?'

Speaker: *Ja, dann hätte ich noch gern Wurst. 250g Salami.*
(female voice) 'Yes. Then I'd like some sausage. 250g of salami.'

Fritz:
Uh, something about *Wurst* and *Salami*. Uh, *250*, 250g of salami, and the *Wurst* as well. So he's asking her what she would like, and she's ordering meat products from a butcher.

Frank:
The guy, in his line, he mentioned *etwas*, which is – which means 'food,' I think. And then, uh, it sort of is confirmed when she mentioned salami. And she gave some sort of number in front of it, so I'm also sort of starting to draw a conclusion that they're at a butcher or a grocery store or something like that from with the food being mentioned and uh – And that's really all, so I can probably also probably start drawing the conclusion that one of them is a customer and the other one is a buyer, although I can't really tell yet which is which.

Although the strategy 'selective attention' was absent from the quantitative analysis, it shows up in the qualitative analysis. In the first segment,

Fritz guesses that the man was asking the woman what she wanted. As he does this, he anticipates what he might hear next. Fritz then selectively attends to the second segment to verify these predictions and develop his hypothesis of what is going on. Fritz is again successful at picking out words that help him do this. Although he incorrectly understands *Wurst* and *Salami* to be different parts of the order, he connects the mention of these meat products with what he had understood from the first segment.

Frank ends up with a similar understanding as Fritz, but he takes a longer, cognitively more exhausting route to get there. Frank seems to confuse *etwas* with *Essen*, 'food,' which is then confirmed for him when he hears *Salami*. He might only think in retrospect that he has heard the word for food, after having heard *Salami*. Frank combines the talk of food with the numbers to come to a similar understanding as Fritz (linguistic inferencing), although he is still unsure which speaker is the server and which the customer.

Tape:
Speaker: *Die ungarische Salami ist im Angebot. 100g zu DM1,45.*
'The Hungarian salami is on special. 100g for DM1.45.'

Fritz:
The Hungarian salami is on special, or he's mentioning it to her. I'm not sure why, but if he's mentioning it to her, it might be because it's on special or something. And 100g for 100 something or other. Some kind of unit of price.

Frank:
I caught the word *ohne* right at the beginning, and that's 'without,' as far as I know. And uh, I thought I caught something like, something without salami, or something like that. It wasn't really that clear to me, and, um, yeah, I'm really -- I'm drawing a blank mostly with that statement, and uh, there's really– Yeah, I can't really come up with anything else.

Because the word *Angebot* did not come up in instruction, Fritz probably just assumes, based on his knowledge of this type of discourse that because the butcher mentioned this type of sausage, it was on special (world elaboration). Frank confuses *ungarisch* and *ohne*. Uwe, another student from the comparison group also confuses these words. Frank gets caught up trying to figure out what this could mean, and this keeps him from understanding any more of the segment. It is possible to try to figure out the meaning of unknown key words without missing the meaning of the rest of the text. This is illustrated by Frauke, a student from the experimental group, as she tries to figure out the meaning of *ungarische Salami*.

Frauke:
Okay, he tells her that a certain type of salami, which I don't know what that word is -- *Ungarisch*? -- is on sale. Uh, I recognise the word from class. Um, but I'm not even sure if I could say it. But I know it's on sale. And, for a certain amount per gram.

Because Frank tries to process the segment in a linear fashion, he does not make it beyond the unknown word. Frauke finishes processing the segment, although she does not note the exact price, before coming back to the unknown word. She does not figure out its meaning, but it does not prevent her from understanding the segment.

Tape:
Speaker: *Gut. Die nehme ich. Und dann bekomme ich noch 6 Frankfurter.*
'Good. I'll take that. And then I'd like six frankfurters.'

Fritz:
She agrees and she takes the previous salami. And on top of that, she would also like to order 6 frankfurters, hot dogs.

Frank:
Yeah, from her response was 'good,' and uh, she said the word *gut*, and uh, it sounds like – it sounded like she said, "*ich nehme*," which sounds – which I think comes from the verb *nehmen*, which means 'to take,' so I'm thinking maybe he's the customer and she's the clerk, and she's saying, good, I'll take care of your order, or something. So, that's sort of what I'm getting from this dialogue right now.

Fritz is on track, and he continues this way, full steam ahead, for the rest of the text. Frank has been derailed. He attempts to repeat what he has heard (repetition, a cognitively uneconomical strategy). He takes up more of his processing capacity by thinking about the infinitive form of the verb (deduction/induction). Following this, Frank has forgotten about the rest of the segment and is left with *nehmen*. Based on this (linguistic inferencing), he makes an inaccurate guess.

Tape:
Speaker: *Darf es sonst noch etwas sein?*
'Would you like anything else?'

Speaker: *Nein, danke. Das wäre alles.*
'No, thank you. That's all.'

Fritz:
He asks her a question, um, to which she responds, *Nein*, that's *alles*. So that is 'all.' I'm assuming he's asking her, just based on that, working backwards, if there's anything else she can get for her, to which she replies, 'No, thank you. That is all.'

Frank:
Okay, well that sort of changes my -- Yeah, that line actually starts to put things into perspective. Especially when she said, *Nein danke, das ist alles*. It sounds -- Now I'm beginning to think that she's the customer and he's the clerk. Because it' sort of changing the perspective, and, uh, yeah, so -- Yeah, that's the main thing.

Fritz initially understands only that a question has been asked. When Fritz repeats, "*Nein*, that's *alles*," he might be translating to figure out the response.

Based on the response, he works out the meaning of the question. Frank repeats "*Nein danke, das ist alles*" (repetition). He also uses the response to figure out the meaning of the question. Frank realises that his hypothesis that the man was the customer was inaccurate (comprehension monitoring).

Tape:
Speaker: *DM31,48 bitte. Vielen Dank. Auf Wiedersehen!*
'DM31.48 please. Thank you very much. Goodbye!'

Fritz:
Gives her a unit of price. Um, to which I'm assuming she's going to pay. And thanks her very much for her business that day.

Frank:
Yeah, so, that about confirms my suspicion then, because, uh he gives a price and then he says, "*Vielen Dank*," which sounds like – *Viel* means 'a lot' or 'many' and *Dank*, so it's like -- it probably means like 'Thanks a lot,' and then *"Auf Wiedersehen*," 'goodbye.' So, yeah, it sounds like he's the clerk, and he's giving her the price, and then he says thank you and goodbye.

At the end, Fritz is left with a good understanding of the text. Frank continues to monitor his comprehension, supporting his modified hypothesis. Then he gets caught up trying to translate *vielen Dank*, which should really remain an unanalysable chunk. Fortunately, Frank had processed enough to be able to summarise the meaning of the segment.

Although a qualitative analysis on its own would also provide an incomplete picture of the findings, this comparison of Fritz and Frank illustrates how misleading a purely quantitative analysis could be. Although Frank used many more strategies than Fritz, he does so with much less economy. Frank appears to be more concerned with accuracy, and therefore relies more on

'bottom-up' processing[4], building up meaning from words. This approach, as well as his uneconomical strategy use, limits his attentional resources, which ultimately hinders his comprehension.

Frank's preference for this approach could have to do with his 'cognitive style.' Each individual has a particular cognitive style, and it is relatively stable. Many cognitive styles have been proposed, but the most common is field dependence. An individual is field-independent if he/she tends to separate relevant information from distracting background information. An individual is field-dependent if he/she tends to take in the whole picture. Frank is likely field-independent, and he tends to perhaps focus too much on detail. In doing so, he often misses the big picture. Because cognitive style is relatively stable, it would be practically impossible for teachers to change their students' cognitive style. Even if had Frank taken part in LLS instruction, it might not have been as effective, because certain strategies may have conflicted with his cognitive preferences.

Although both students arrive at a similar understanding of the text, Fritz' understanding is clearly more complete. Neither listener has the linguistic knowledge to use bottom-up processing for a very detailed understanding of the text. If there is any difference in linguistic knowledge between the two listeners, it is likely that Fritz actually has less than Frank. Fritz appears to be less

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[4] Listeners use their knowledge of words to focus form (bottom-up processing) and then use their knowledge of the world to focus on meaning, or vice-versa ('top-down' processing) (Rubin 1994). Although most listeners use a combination of bottom-up and top-down processing, "a heavy reliance on a bottom-up approach requires the listener to bring to conscious memory appropriate rules to aid understanding. This severely limits the capacity to hold meaning in STM (short-term memory) since valuable processing capacity is taken up by declarative knowledge" (Vandergrift 1992: 49).

concerned with accuracy, and therefore demonstrates more of a balance between bottom-up and top-down processing, relating what he understands in the text to his world knowledge.

Fritz' preference for this approach could have to do with his cognitive style. He is likely field-dependent, and he tends to take in the whole picture. While this helped him get the gist of the think-aloud texts, he would perhaps not perform so well, e.g., on grammar exercises, which demand a greater attention to detail. The LLS instruction may have been particularly successful for Fritz because many strategies agreed with his cognitive preferences.

The second comparison is of Hannes and Urs, from the experimental group and the comparison group, respectively. Hannes was a slightly more proficient listener than Urs, scoring 23 on the post-test of listening comprehension proficiency compared to Urs' 19. Hannes and Urs both reported using about the same number of strategies on the questionnaire (65 and 62, respectively) and during the think-aloud procedure (38 and 36, respectively).

Tape:
(street noises)
Speaker: *Guten Tag, Frau Hernicke!*
(male voice) 'Hello, Mrs. Hernicke!'

Speaker: *Tag, Herr Meiners! Gehen Sie heute einkaufen?*
(female voice) 'Hello, Mr. Meiners! Are you going shopping?'

Speaker: *Ja, meine Frau ist krank.*
'Yes, my wife is sick.'

Hannes:
I know they're on a formal basis because they use the words *Herr und Frau*. And, I believe she asked him if he was out searching for something, and then he said something about his wife is sick, so they could be either running into each other there, or they actually at a drug store looking for something.

Interviewer: How did you, um, figure that out, um, that he was, uh, looking for something?

I think she asked him, but I didn't catch exactly what she said.

Interviewer: And what about that they're at a drug store?

I'm just assuming that, but I heard a bunch of vehicles in the background, so they could be outside, running into each other on the street. I hadn't really determined that yet.

Urs:
'Good morning Frau somebody.' She returned with – I'm not entirely certain, but his wife is sick was the end of it, I do believe, "*Meine Frau ist krank.*"

Hannes starts by noting the nature of relationship between the speakers and working down from there. He understands that the man is "searching for something" and that his wife is sick, although it is not clear what he means by "searching for something." Based on this (world elaboration), he hypothesises that the conversation takes place in a drug store. This suggests that by "searching for something," he meant shopping. Because of the background noises, he realises that the conversation could also be taking place outside (extralinguistic inferencing). Despite this conflicting evidence, Hannes remains open to both possibilities. Urs summarises as much of the segment as he can, but he does not seem to move beyond the surface to connect the different parts that he does understand.

Tape:
Speaker: *Ich hoffe, es ist nichts schlimmes.*
'I hope it's nothing bad.'

Speaker: *Nein, sie hat nur leichtes Fieber.*
'No. She just has a light fever.'

Hannes:
Uh, she used the word *sie*. And then she said something about – I'm assuming it's about his wife, because he came back and said no, it's just a fever. So I know she's asking about how his wife is feeling, just by catching those two or three words.

Urs:
She asked a question, presumably, 'What's wrong with her?' "*Nein*" 'she doesn't have a fever?' or 'she is running a fever?' I caught 'fever' in there. I caught *nein* in response to her question, but I didn't catch exactly what she was asking.

Hannes combines the response with his knowledge of the conventions of small talk (world elaboration) to figure out what the question was. Urs does the same, but since he is not so sure about the response, his guess is not as accurate.

Tape:
Speaker: *Grüßen Sie bitte Ihre Frau von mir, und wünschen Sie ihr gute Besserung!*
'Say hi to your wife from me, and tell her to get well soon.'

Speaker: *Das mache ich. Auf Wiedersehen, Frau Hernicke!*
'I'll do that. Goodbye, Mrs. Hernicke!'

Speaker: *Auf Wiedersehen Herr Meiners!*
'Goodbye, Mr. Meiners!'

Hannes:
I missed almost all of what she said, except for the last bit. She said *Besserung*, so I made the jump to say that's 'better,' so I'm gonna say that she was telling him that I hope your wife feels better, because he said at the end, you know, thank you very much.

Urs:
I just presume that she was saying 'I hope your girlfriend or your woman gets better,' 'cause I caught *Frau* and I caught a couple of words that seemed to indicate that sort of a sentence. And then they parted ways. They both said goodbye. A street corner meeting, if that means anything.

Hannes and Urs again miss much of what is said, but are able to connect what they do understand (using linguistic inferencing) to understand most of the segment.

Neither Hannes nor Urs possess the linguistic knowledge to use bottom-up processing for a very detailed understanding of this text. Unlike Frank, but like Fritz, both Hannes and Urs use a more economical top-down approach. Even when most words seem to elude him, Hannes is able to integrate a few words with other information, including the conceptual framework that he has developed, to construct meaning. Urs uses similar strategies as Hannes, yet he does not arrive at such a full understanding of the text. This is likely due in part to the fact that Urs does not have as much linguistic knowledge as Hannes. This is also due to qualitative differences in his strategy use. Like Hannes, Urs understands what parts he can and combines this with other information, but he does not make as many connections between different parts that he understands.

The last sample comparison is of Ulrike and Uwe, two listeners of about the same listening comprehension proficiency, from the experimental and comparison groups, respectively (Ulrike scored 23 on the post-test of listening comprehension proficiency, and Uwe scored 24). Ulrike reported a disproportionately high frequency of strategy use on the questionnaire (79 compared to Uwe's 62), but only 32 strategies during the think-aloud procedure (compared to Uwe's 43).

Tape:
Speaker: *Guten Tag!*
(male voice) 'Hello!'

Speaker: *Guten Tag! Sie wünschen?*
(female voice) 'Hello! May I help you?'

Speaker: *Ich möchte meiner Freundin Blumen schenken. Sie hat morgen Geburtstag.*
'I'd like to give my girlfriend flowers. It's her birthday tomorrow.'

Ulrike:
Oh, *Geburtstag*. Someone's birthday! And, two people meeting. And he brings up a birthday, so it could be any number of things.

Uwe:
They greeted each other, the man and the woman. And um, oh, I can't – The man said, like – I heard the word *wünschen*, but I don't know what that means. Well, the only thing that I'm sure is that the man said, "*Sie hat Geburtstag*," 'She has a birthday.' I don't know who she is, or who's he's talking about. I can only understand that.

Ulrike does not seem to understand very much, other than the number of people and one word (linguistic inferencing), but based on that, she starts to form hypotheses, predicting what she might hear next (selective attention). Uwe summarises what he understands, but he also focuses on what he does not understand. Uwe repeats, then translates, "*Sie hat Geburtstag*." This could be because Uwe has more linguistic knowledge than Ulrike, so he recognises more words. Trying to process word by word quickly uses up his short-term-memory. It is not clear at the end of this segment if Uwe is beginning to form hypotheses about what he might hear next.

Tape:
Speaker: *Dann schenken Sie ihr doch Rosen! Wir haben heute ganz besonders schöne frische Rosen: Rosarote, gelbe und rote.*
'Well. why don't you give her roses, then? We have especially beautiful fresh roses today: pink ones, yellow ones, and red ones.'

Speaker: *Rote Rosen. Ja, das ist gut.*
'Red roses. Yeah, that's good.'

Ulrike:
Okay, I don't think it's his birthday, because they're talking about flowers. Maybe it's his wife's birthday or something and they're talking about some kind

of roses: red roses, yellow roses, all sorts of different colours. So maybe she's trying to sell him something.

Uwe:
Oh, I know it now. The woman said -- Oh, then – The woman said, You can give her *Hosen*, 'pants.' So you can – *„Sie können Hosen schenken*," 'You can give her pants for a present.' And then she said – Well she's probably a saleswoman. They're probably at a *Kaufhaus* or someplace. And the woman said, We have like *gelb*, and *rot*. And the woman said, we have some colours. I don't – I can't remember what colours she said. And then the man said, "*Rote Hosen*." So the man said he wanted to take the red pants. So he wanted to give her, I don't know, whoever she is, give her the red pants for a birthday present

Here Ulrike exemplifies comprehension monitoring by evaluating one of her hypotheses, that it was the man's birthday. She then refines her hypothesis and makes further predictions. Unfortunately, Uwe misunderstands a very important word[5]. German initial /r/ and /h/ are both produced with the velum, making *Rosen* and *Hosen* easier to confuse than it might seem. In the first segment of the first text, Uwe understands "*Wer kommt jetzt dran?*" as "*Willkommen*…." This suggests that Uwe may have difficulty distinguishing /r/ from certain other sounds. Uwe continues to translate. Some attentional resources remain for him to hypothesise where the conversation might be taking place and about the roles of the speakers.

Tape:
Speaker: *Darf ich sie Ihnen zeigen? Bitte, kommen Sie!*
'May I show them to you? Please, come!'

Ulrike:
Ooh, I didn't really catch that. She's just talking. I don't know.

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[5] The researcher's instinct as a teacher was to correct the student. Although it was not possible for the purposes of the research, it was with a guilty conscience that the researcher did not intervene. This illustrates the type of inner conflict that teachers conducting research can face.

Uwe:
The man – The woman said, „*Ich zeige*." That probably -- She probably said, I'll show you the red pants. Please follow me. „*Kommen Sie*," or something.

Ulrike, like most students that participated in the think-aloud procedure, was unable to understand this segment. Uwe was an exception to this. He picked up on *zeigen* and *Bitte kommen Sie*. Uwe integrated this into his conceptual framework, in which the man is buying pants.

Tape:
Speaker: *Oh, die sind aber schön. Was kosten sie denn?*
'Oh, those are nice. How much do they cost?'

Speaker: *Rote Rosen? Moment -- sie kosten DM5 das Stück.*
'Red roses? Just a moment – they cost DM5 per stem.'

Ulrike:
Okay, she is trying to sell him flowers. And –

Interviewer: How did you figure that out?

Because she gives him the price of the flowers. If she was just some lady watching him buy flowers, she wouldn't be so helpful. And, um, he decides the red ones are nice and he wants to know the price of them and she gives it to him.

Uwe:
The man said, The red pants are beautiful. How much do they cost? The woman said, The red pants? Wait a minute. And then she found out the price and said, something – I can't really remember.

Ulrike recovers from the previous segment and uses a combination of what she understands in this segment and her world knowledge to confirm her current hypothesis, that the woman is trying to sell the man something (comprehension monitoring). Other than continuing to confuse *Rosen* and *Hosen*, Uwe understands this segment.

Tape:
Speaker: *Fünf Mark. Das ist teuer.*
'Five marks. That's expensive.'

Speaker: *Ja, billig sind sie nicht, diese Rosen, aber schön. Wie viele darf ich Ihnen geben? Zehn? Fünfzehn?*
'Yes, these roses aren't cheap, but they're nice. How many may I give you? Ten, fifteen?'

Ulrike:
I think he's cheap. Ooh, "*fünf Mark*, 'that's expensive.'"

Interviewer: And, um, uh, what didn't you understand?

Um from that, I kind of got caught up in that because it was funny. And she said other numbers too, but I'm not sure what they were in reference to. Other prices, maybe. I don't know.

Uwe:
The man said, „*fünf Mark*?" And the man said, "*Das ist zu teuer*," 'That is too expensive.' And the woman said, then you can -- I heard *billig*, something like *billige Hosen*, 'cheap pants.' The woman said, "*billige Hosen sind schön*," or probably the woman said the cheap pants are also very nice, too. And uh, then I don't quite understand.

By passing judgement on the speaker, Ulrike makes a personal connection to what she is hearing. Instead of aiding her comprehension, this causes her to lose concentration and she misses most of this segment, except that numbers were mentioned. Based on this, she inaccurately guesses what might have been said. Uwe again resorts to translation. He interprets *billig* using his established conceptual framework. He was unable to understand any more, perhaps because his processing capacity had been taken up by translating and trying to figure out how *billig* fits in.

Tape:
Speaker: *Nein, nein, so viel Geld habe ich nicht. Geben Sie mir mal, geben Sie mir mal, fünf. Diese zwei – und diese zwei – und diese hier.*
'No, no, I don't have so much money. Give me five. These two, these two, and this one here.'

Ulrike:
Oh, now he's picking out flowers. He's like, these two and these two and these here.' And – oh, the other – the number she said before must be in reference to the yellow roses, which are certainly too expensive for his taste.

Uwe:
The man said, „*Nein, nein,*" ‚No,' I don't quite – because that sounded that he didn't want anything. But then he said he wanted „*diese zwei,*" like ‚these two.' So he was actually buying something, but that's kind of confusing, because – so I'm not really sure what the man said before he said he wanted these pants.

Ulrike generally understands this segment, although she continues to develop her faulty hypothesis about the missing information from the last segment. Uwe originally guesses that "*Nein, nein,*" means, 'No, I wouldn't like any.' He then realises that the man indeed would like to buy something (comprehension monitoring), but he is too confused to revise his hypothesis. Despite the fact that the man orders five, Uwe holds to his hypothesis that the man is buying pants.

Tape:
Speaker: *Fünf rote Rosen. Darf ich sie Ihrer Freundin schicken?*
'Five red roses. May I send them to your girlfriend?'

Speaker: *Nein, nein, ich gebe sie ihr lieber selbst. Hier bitte, hier sind DM25.*
'No, no, I'd rather give them to her myself. Here's DM25.'

Speaker: *Danke schön!*
'Thank you!'

Ulrike:
And then he picks out five red roses. And she asks if he wants something else in there, I guess, and he says no. And then he pays her and she says thank you.

Uwe:
I'm not sure about what the woman said after that. And then the woman asked the man, Do you want to give her that? Or do you want to give her those pants as a present? And the man said „*Nein*." Probably he wanted to wear them himself, because I heard the word *selbst*, does that mean ‚self?' I'm not pretty sure. So and then the woman said, Okay then, goodbye. I don't quite get it.

Ulrike does not understand the woman's question and the man's response, nor does she make much of an effort to fill in this missing information. Still, at the end she has a relatively good general understanding of the text. Uwe makes more of an effort to fill in the information, which is also missing for him, but his guess about the woman's question is inaccurate. Based on this inaccurate guess, the word *selbst* (linguistic inferencing), and his faulty assumption about the pants, Uwe also inaccurately guesses the man's response. At the end, Uwe is clearly confused about the text as a whole.

Ulrike's strategy use is not perfect, but she understands this text by forming hypotheses about what she is hearing using a combination of what she understands and her world knowledge. She selectively attends to the input to evaluate these hypotheses. In doing so, she does not understand all of the details of the text, but she understands the most important parts. Uwe uses more strategies than Ulrike, but he uses them less effectively. He uses the lesss effective strategies 'translation' and 'repetition.' Although he may understand more details than Ulrike, Uwe misunderstands some very important details. He has ample opportunity to revise his hypothesis, but he does not.

Although the comparison group used a higher quantity of LLSs during the think-aloud procedure, a comparison of the protocols of students from the experimental and comparison groups shows that this does not necessarily translate

into higher quality strategy use. In fact, the higher rate of strategy use by the comparison group is due in part to a lack of economy. Listening strategies are an investment of cognitive resources. If invested wisely, they enhance comprehension. If not, they use up valuable attentional resources. To use up even more attentional resources, the students from the comparison group use the less effective strategies translation, repetition, and deduction/induction more frequently, as was evident in the quantitative analysis. As can be seen, this limits processing capacity and sometimes hinders comprehension. Students from the experimental group demonstrate more of a balance between top-down and bottom-up processing.

As became evident in the comparison of Fritz and Frank, LLS use interacts with cognitive style. Based on their cognitive style, students will prefer some strategies over others. Because it is so difficult to change cognitive style, an individual's success in learning certain LLSs will depend on the LLSs' agreement with the individual's cognitive style.

4.2.3 Summary of Phase II

In Phase II, students took part in a think-aloud procedure. The results, as presented above, are again mixed in terms of the value of LLS instruction. In response to the second research question, the students that had received LLS instruction did not report a higher total frequency of listening strategies. They did, however, report using inferencing more frequently. In response to the third research question, the students that took part in the think-aloud procedure that had received LLS instruction used strategies more effectively, demonstrating more of

a balance between bottom-up and top-down processing. This difference in approach could also be due to cognitive style.

4.3 Conclusion

This chapter has presented the results of the quantitative and qualitative analyses of the data collected by this study. The results have not shown that LLS instruction increases listening comprehension proficiency nor frequency of total listening comprehension strategy use. They have, however, suggested that LLS instruction encourages guessing and helps students to use strategies more effectively. The following chapter will discuss these results and their implications for foreign language teaching and further research.

Chapter V

Discussion, Conclusions and Implications

5.1 Discussion

The results, as presented in the previous chapter, are mixed in their findings. According to the quantitative analysis, LLS instruction did not appear to increase students' listening comprehension proficiency or reported listening comprehension strategy use.

LLS instruction might, however, have helped students to use strategies more effectively. The students themselves evaluated the LLS instruction overwhelmingly positively. The fact that students from the experimental group reported inferencing more frequently suggests that the LLS instruction may have been successful in promoting guessing. The qualitative analysis revealed that the students from the experimental group demonstrated a better balance between bottom-up and top-down processing.

This section will begin with a discussion of possible reasons why the LLS instruction might have been ineffective in increasing students' listening comprehension proficiency and reported strategy use. A discussion of the results will follow, according to listening comprehension proficiency and reported strategy use.

5.1.1 Apparent ineffectiveness of language learning strategy instruction

There are several possible reasons why the LLS instruction might have been ineffective in increasing students' listening comprehension proficiency and reported listening comprehension strategy use. The first of these is that the

treatment was relatively short. Even though the LLS instruction took place over the course of the semester, it consisted of only six lessons.

Other reasons might have to do with strategy assessment and selection. The results of the first administration of the listening questionnaire could have acted as a strategy assessment for the students and the instructor. The results were not discussed, because the students filled out the same questionnaire twice. Had they been discussed, students might have reported what they thought their instructor/the researcher wanted them to when they filled out the questionnaire for the second time. The results of the first administration of the questionnaire were also not used to select the strategies to be taught, because they had already been selected before the questionnaire data were analysed. Their selection was based largely on strategies that have been reported by successful listeners in the literature, rather than students' pre-treatment strategy use. This is another example of how the investigator was compromised as a teacher by his own research.

Another possible reason why the instruction might have been ineffective has to do with motivational issues. Many students were probably not motivated by the possibility of becoming better foreign language listeners, rather by the possibility of receiving a higher grade. If they had been motivated to become better foreign language listeners, they would have attended more listening comprehension lessons. Because listening comprehension was not tested explicitly, students perhaps saw little connection between attending listening comprehension lessons and their grades (other than their participation mark,

which includes attendance). Perhaps not surprisingly, attendance for listening comprehension lessons was poor. An average of 5.33 students out of 20, more than a quarter of the class, were absent for each lesson. Considering that the treatment consisted of only six lessons, each lesson was especially important. It goes without saying that in order for instruction to be effective, students must at least be physically present.

The LLS instruction might have been ineffective in increasing students' listening comprehension proficiency and reported listening comprehension strategy use due to the issues discussed above. This discussion should help make teachers aware of difficulties that they could face in their own instruction.

5.1.2 Listening comprehension proficiency

Both the experimental group and the control group became more proficient listeners over the course of the treatment period. This is not surprising, since they had German instruction for one hour every day, five days a week, for eleven weeks.

LLS instruction did not appear to increase students' listening comprehension proficiency. Besides the instruction itself, there are a couple of possible explanations for this. Although there was no significant difference between groups before the treatment, the students in the experimental group were more proficient listeners. There might have been a ceiling effect for the most proficient listeners. Since there was less room for improvement for the experimental group, it is not so surprising that their listening comprehension proficiency did not increase more than the comparison group's did.

Another possible explanation is the instructor effect. Each group was taught by a different instructor, and only for the listening comprehension lessons were the instructors careful that their lessons were as similar as possible. Not only lessons devoted specifically to listening comprehension develop listening comprehension proficiency. As important as LLSs are, they are not the only factor that contributes to proficiency. It could be that the other instructor was more effective in other ways.

5.1.3 Listening comprehension strategy use

Both the experimental and control groups reported using more listening comprehension strategies after the treatment period than before. This is not surprising, since they had become more experienced and proficient listeners.

LLS strategy instruction appeared to increase students' reported listening strategy comprehension use, but not significantly more than listening comprehension instruction without LLSs. Besides the instruction itself, there are a few possible explanations for this. The difference in amount of improvement between the two groups might have failed to reach significance because of the small number of participants in the study.

Another possible reason is similar to one why the experimental group's listening comprehension proficiency did not increase more than the comparison group's did. Although there was no significant difference between groups before the treatment, the experimental group reported used listening comprehension strategies more frequently. Since there was less room for improvement for the

experimental group, it is impressive that their strategy use increased more than the comparison group's at all.

Only one think-aloud procedure was conducted, so it is not possible to compare students' LLS use as reported in the think-aloud procedure before and after the treatment. A comparison of post-treatment strategy use reported in the think-aloud procedure shows no evidence of more frequent use by students that received LLS instruction than by those that did not. This is in part due to the fact that the students from the comparison group used problem identification much more frequently than those from the experimental group did. Students in the comparison group probably used problem identification more often because they had more difficulty understanding the texts, as was evident in the qualitative analysis.

Both groups of students reported the same number of cognitive strategies. The students from the experimental group reported inferencing more frequently than those from the comparison did. This suggests that the LLS instruction was successful in promoting guessing.

The fact that students in the comparison group reported using so many strategies on the post-treatment administration of the questionnaire and during the think-aloud procedure could have to do with their instructor. During the listening comprehension lessons, she was careful not to integrate LLSs into her instruction. Still, it is possible that she conducted *implicit* LLS instruction. For example, a student in the comparison group may have seemed unsure when giving an answer to a question during a listening comprehension task. His or her instructor may

have told him or her to attempt a guess. By doing so, the other instructor could have encouraged her students to use inferencing, even though she did not directly explain it.

LLSs were not explicitly discussed in any of her lessons, but the possibility that students in the comparison group learned about LLSs implicitly is made more likely by the fact that the textbook implicitly integrates LLSs into other tasks, such as reading comprehension. Students could have transferred LLS use with other language skills to listening comprehension. If students in the comparison group indeed did this, it would also help explain why their listening comprehension proficiency increased so much.

There are some methodological reasons why a quantitative analysis of the think-aloud procedures might not provide a completely accurate picture of all students' strategy use. The students from the experimental group that took part in the think-aloud procedure and were included in the quantitative analysis were slightly more proficient listeners than those from the comparison group were. Those from the experimental group scored an average of 26 out of a possible 35 on the post-test of listening comprehension proficiency compared to the comparison group's average of 22. Some students from the experimental group understood some texts with great ease. It is possible that these texts were so easy for them that their strategy use became unconscious, so that these mental processes were not available for verbal report. In these cases, summarisation was almost the only strategy reported by these students. This is illustrated by Hannes in the second-last segment of the first text.

Tape:
Speaker: *Darf es sonst noch etwas sein?*
'Would you like anything else?'

Speaker: *Nein, danke. Das wäre alles.*
'No thank you. That's all.'

Hannes:
He asked her if she wanted anything else, and she said, no, that was it. I caught all of that.

Even when students used strategies consciously, it is possible that they did not report using them. A comparison of the think-aloud protocols with those conducted by Vandergrift (1992) reveals that the students in the present study were prompted relatively seldom. Although the results are more reliable than if the students had been prompted excessively, since they were prompted so seldom, each student decided when their report was complete. This means that students' reports reflected the completeness of their thoughts to varying degrees; some students could have used strategies that they did not report. For these reasons, a comparison of the quantitative results of the think-aloud procedure does not provide a very accurate picture of the differences in strategy use between the two groups.

As the qualitative analysis of the think-aloud protocols revealed, a purely quantitative analysis of listening comprehension strategy use can be misleading. The students that took part in the think-aloud procedure from the experimental group did not use more strategies than those from the comparison group, but they did use strategies more effectively. They demonstrated more of a balance between bottom-up and top-down processing. The LLS instruction appears to have been effective in discouraging these students from using ineffective

strategies such as translation, repetition, and deduction/induction (These preferences for a certain approach or certain strategies could also be due to each student's learning style). Because the students from the experimental group avoided these ineffective strategies, it helped them to use their attentional resources more wisely, freeing up more of their processing capacity to help them understand the texts better. These students combined what they understood in the text with their world knowledge to form hypotheses and predict what they might hear next. They then selectively attended to the texts and monitored their comprehension. This approach helped the students from the experimental group understand the think-aloud texts better than those from the comparison group did.

The students from the comparison group attempted more 'surface processing'[6]. This is reflected in the fact that they reported translation, repetition, and deduction/induction more frequently.

It seems as if the LLS instruction may have indeed been effective in helping students use strategies to become more effective listeners. But this then raises the question why this is not reflected in the listening comprehension proficiency results. There are two possible answers to this. The first is that the students that took part in the think-aloud had above-average attendance for the listening comprehension lessons, each attending at least five of the six lessons. The strategy instruction might have been effective for them but not others simply because they attended more of the lessons than others did.

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[6] In surface processing, learners obtain information from a text and attempt to memorise it. This is in contrast to deep processing, where learners try to understand the new information and integrate it with other parts of the text or their world knowledge (Prokop 1989).

This answer is not complete, however, because Heidrun, the ineffective listener that took part in the think-aloud procedure, also attended five lessons, and she did not understand the texts very well. This might be because Heidrun lacked the linguistic knowledge to even be able to begin to use strategies to help her understand what she was hearing. This possibility is evident in a comparison of her protocol of the last segment of the second think-aloud text with Frauke's.

Tape:
Speaker: *Grüßen Sie bitte Ihre Frau von mir, und wünschen Sie ihr gute Besserung!*
'Say hi to your wife from me, and tell her to get well soon.'

Speaker: *Das mache ich. Auf Wiedersehen Frau Hernicke!*
'I'll do that. Goodbye Mrs. Hernicke!'

Speaker: *Auf Wiedersehen Herr Meiners!*
'Goodbye Mr. Meiners!'

Heidrun:
Um, I don't really understand what she was saying. Um, I didn't really rec- there's no really any words that kind of stuck out to me. I know they say goodbye to each other at the end, but that's pretty much it.

Frauke:
Okay, I understood something about *grüßen. Grüßen Sie* -- I'm just making an inference that she's sending best wishes to his wife. I understand only a few words, but that sort of seems like what she would say. And he says that he will.

Frauke only picks up on *Grüßen Sie* --, but she is able to relate this to her world knowledge to understand this segment. Because Heidrun cannot pick up on this, she is unable to make this elaboration. It is possible that Heidrun also lacked the linguistic knowledge to be able to use strategies to help her better understand the texts of the listening comprehension proficiency test. Therefore, the second possible answer is that Heidrun and some other students in the experimental group

lacked the linguistic knowledge to even be able to use strategies to help them better understand the texts of the listening comprehension test. In other words, the listening comprehension test may have set the bar too high for the weakest students, thus failing to record any improvement in proficiency between the pre- and post-tests.

5.2 Conclusions

LLS instruction did not appear to increase students' listening comprehension proficiency or reported listening strategy use significantly. This apparent ineffectiveness could be due to a number of instructional issues, most notably motivation (and its effect on attendance). The lack of significant results could also be due to the small number of participants or methodological flaws, such as a ceiling effect or an instructor effect.

The quantitative results do not clearly show that LLS instruction increases students' listening comprehension proficiency or reported listening strategy use. They do, however, suggest that the LLS instruction might have been successful in promoting guessing. The qualitative results suggest that LLS instruction might help students use strategies more effectively. These results, combined with the overwhelmingly positive feedback from students, lead to the conclusion that learning strategies are a valuable part of foreign language instruction.

5.3 Implications

Learning strategies should be a part of foreign language instruction. As this study has shown, LLS instruction might promote guessing and help students

use strategies more effectively. Perhaps even more importantly, students themselves like LLS instruction, and they find it helpful.

To start including learning strategies in their instruction, foreign language teachers can refer to the section on how to teach LLSs. Weaver and Cohen (1994, Cohen 1998) make some suggestions about how language teachers could be trained to teach LLSs even more effectively. Teachers could attend presentations, colloquia, and workshops on strategy training at professional conferences. Ideally, in-service seminars could be developed. These could include readings, lectures, discussions, observations of expert teachers, hands-on LLS activities, sessions about integrating LLSs into lesson plans, and micro-teaching sessions.

It is ultimately up to teachers to educate themselves about LLSs and include them in their own instruction, but language course co-ordinators could encourage this. They could do this by supporting or offering LLS training. Seminars on LLSs could be offered as part of orientation for incoming foreign language instructors.

Language course co-ordinators can also promote LLSs by including them in curricula. There is a movement towards this at the secondary level in the prairie provinces of Canada. The *Common Curriculum Framework for International Languages* (i.e., languages other than English, French, and Aboriginal languages) (Western Canadian Protocol for Collaboration in Basic Education, 2000) provides student learning outcomes that can be used to develop curricula. Learning outcomes are the knowledge, skills and attitudes that students are expected to achieve. The framework lists strategies, including LLSs (as well

as language use and general learning strategies), alongside applications, language competence, and global citizenship as one of the general learning outcomes of the curriculum. I.e., in the course of their language learning experience, students are expected to "know and use strategies to maximise the effectiveness of learning" (9). This broad statement is broken down into specific learning outcomes for cognitive, metacognitive, and social/affective strategies that students are expected to achieve by the end of each grade.

This focus on strategies at the secondary level should eventually result in more independent learners pursuing post-secondary studies. Of course, this is only possible if students choose to learn a second language. Provincial governments should introduce a second language requirement in high schools, so that all students begin their development as language learners at an earlier age.

As it is right now, though, because many students begin learning languages at university with little or no language learning experience, they have not developed LLSs. Language course co-ordinators at the post-secondary level need to recognise the value of LLSs, especially since it seems like an important goal of post-secondary education to foster independent learning.

If students become more autonomous, they will be able to continue to learn beyond the classroom, independent of their teachers. LLSs are the key to greater autonomy. By helping students develop and use LLSs in more effective ways, language teachers are helping their students become better language learners. Besides learning a language, they are learning to learn.

5.4 Recommendations for further research

The results of this study suggest that the relationship between LLS instruction and improved proficiency and strategy use warrants further investigation, even though they are far from conclusive. Although methodological flaws of the present study put the results into question, a review of the difficulties faced while conducting this study should help others in their future research.

The time available for the present study was restricted. Ideally, LLS instruction should take place over a longer period of time, for the simple reason that LLSs, like many things, take time to learn. For some students, one semester of LLS instruction was effective. For others, it was not, not because LLS instruction is generally ineffective, rather because one semester was not enough time for them to "get it."

The University of Wisconsin College-Level Placement Test was used to measure listening comprehension, because it did not seem to be too difficult at its first administration. Although this was the case for many students, it actually might have been too difficult for some students even at its second administration. For other students, there may have been a ceiling effect. This illustrates how important yet difficult it is to find testing materials to use on a pre-test post-test basis. They cannot be too difficult for the weakest students at the time of the pre-test nor too easy for the strongest students at the time of the post-test.

It is just as important yet difficult to find texts to use for the think-aloud procedure. These texts should not be so easy for the strongest students that they

use LLSs automatically, yet not so difficult for the weakest students that they become frustrated.

The listening questionnaire used in the present study is still under development. The data gathered in this study could help refine this questionnaire. Future researchers might be able to use this questionnaire, not only to obtain a score for total strategy use, rather also for a more reliable sub-score for each strategy type.

In the present study, the investigator only taught one course section. If it were possible to compare two classes taught by the same teacher, it would eliminate the instructor effect. The present study was conducted in a classroom setting. While this is closer to the environment in which most teachers would teach LLSs, it is more difficult to control for different variables. It would be easier to control these variables if a similar study were conducted in more of a laboratory setting. Of course, the more participants that take part in the study, the more likely the results are to reach significance, and the more generalisable the results are.

5.5 Concluding remarks

At the beginning of my second year teaching beginner's German to university students, I encountered more students like Frank, e.g., Frauke. Unlike Frank, however, Frauke and her classmates received LLS instruction. LLSs helped students like Frauke realise more of their language learning potential. Below, Frauke verbalises her thoughts as she tries to understand the same segment as Frank did at the beginning of the paper.

Tape:
Speaker: *Fünf rote Rosen. Darf ich sie Ihrer Freundin schicken?*
(female voice) 'Five red roses. May I send them to your girlfriend?'

Speaker: *Nein, nein, ich gebe sie ihr lieber selbst. Hier bitte, hier sind DM25.*
(male voice) 'No, no, I'd rather give them to her myself. Here's DM25.'

Speaker: *Danke schön!*
'Thank you!'

Frauke:
Okay, she says *fünf Rosen*, so she says 'five roses.' Um, and then I hear *schenken*. Um, so she asks him if he wants them sent? To his? To his girlfriend. And he says, 'no.' Something about *selbst*, uh, so 'self.' So I assume that he wants to take them himself to her. And he's giving her the money for the roses.

Frauke does not understand any more details than Frank, but she seems to realise that she does not need to understand every word to understand the segment. Based on what little she understands, she makes guesses to generally understand the whole segment.

Language teachers are sure to encounter students like Frank. They can help their students unlock their own language learning potential, like Frauke. The key to this is language learning strategies.

REFERENCES

Arendt, J.D., Baumann, C.C., Peters, G., and Wakefield, R.M. (1992). *Kreise*. Boston: Heinle & Heinle.

Brown, A.L., and Palincsar, A.S. (1982). Inducing strategies learning from texts by means of informed, self-control training. *Topics in Learning and Learning Disabilities* 2: 1-17.

Brown, A.L., Bransford, J.D., Ferrara, R. and Campione, J.C. (1983). Learning, remembering, and understanding. In J. H. Flavell & E. M. Markham (Eds.), *Carmichaels Manual of Child Psychology*, Vol. 1. New York: Wiley.

Chamot, A.U., Küpper, L., and Impink-Hernandez, M.V. 1988a. *A study of learning strategies in foreign language instruction: findings of the longitudinal study*. McLean, Va.: Interstate Research Associates.

Chamot, A.U., Küpper, L., and Impink-Hernandez, M. V. 1988b. *A study of learning strategies in foreign language instruction: the third year and final report*. McLean, Va.: Interstate Research Associates.

Chamot, A.U., O'Malley, J.M., Küpper, L., and Impink-Hernandez, M.V. (1987). *A study of learning strategies in foreign language instruction: first year report*. Rosslyn, Va.: Interstate Research Associates.

Cohen, A.D. (1998). *Strategies in Learning and Using a Second Language*. Harlow: Longman.

Dadour, S. and Robbins, J. (1996). University-level studies using strategy instruction to improve speaking ability in Egypt and Japan. In R. Oxford (Ed.), *Language learning strategies around the world: cross-cultural perspectives* (Technical Report 13), pp. 157-66. Second Language Teaching & Curriculum Center, University of Hawaii, Honolulu.

Fujiwara, B. (1990). Learner training in listening strategies. *JALT Journal* 12, 203-17.

Garner, R. (1988). Verbal-report data on cognitive and metacognitive strategies. In C. E. Weinstein, E. T. Goetz & P. A. Alexander (Eds.), *Learning and study strategies*, p.63-76. New York: Academic Press.

Jones, B.F., Palincsar, A.S., Ogle, D.S., and Carr, E.G., (1987). *Strategic teaching and learning: cognitive instruction in the content areas*. Alexandria, VA: Association for Supervision and Curriculum Development.

Mendelsohn, D.J. (1994). *Learning to Listen: A Strategy-Based Approach for the Second-Language Learner*. San Diego: Dominie Press, Inc.

Murphy, J.M. (1985). *An Investigation into the Listening Strategies of ESL College Students.* [ERIC Document Reproduction Services No. ED 278 275]

Naiman, N., Fröhlich, M., Stern, H.H., and Todesco, A. (1978). *The good language learner*. Toronto: Ontario Institute for Studies in Education.

O'Malley, J.M. and Chamot, A.U. (1990). *Learning strategies in second language acquisition.* Cambridge: Cambridge University Press.

O'Malley, J.M., Chamot, A.U., and Küpper, L. (1989). Listening comprehension strategies in second language acquisition. *Applied Linguistics* 10, 418-37.

O'Malley, J.M., Chamot, A.U., Stewner-Manzanares, G., Küpper, L., and Russo, R. (1985a). Learning strategies used by beginning and intermediate ESL students. *Language Learning* 35, 21-46.

O'Malley, J.M., Chamot, A.U., Stewner-Manzanares, G., Küpper, L., and Russo, R. (1985b). Learning strategy applications with students of English as a second language. *TESOL Quarterly* 19, 285-296.

Oxford, R.L. (1989). Use of language learning strategies: A synthesis of studies with implications for strategy training. *System* 17, 235-47.

Oxford, R.L. (1990). *Language learning strategies: What every teacher should know.* New York: Newbury House.

Oxford, R.L. (1993). Research on Second Language Learning Strategies. *Annual Review of Applied Linguistics* 13, 175-87.

Paris, S.G. (1988). Fusing skill and will: the integration of cognitive and motivational psychology. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, April 1988.

Paris, S.G., Newman, R.S., and McVey, K.A. (1982). Learning the functional significance of mnemonic actions: a microgenetic study of strategy acquisition. *Journal of Experimental Child Psychology*, 34, 490-509.

Prokop, M. (1989). *Learning Strategies for Second Language Learners*. Queenston: Mellen.

Rigney, J.W. (1978). Learning strategies: A theoretical perspective. In H. F. O'Neill (Ed.), *Learning strategies*, pp. 165-205. New York: Academic Press.

Rubin, J. (1975). What the "good language learner" can teach us. *TESOL Quarterly*, 9, 41-50.

Rubin, J. (1981). Study of cognitive processes in second language learning. *Applied Linguistics*, 11, 117-31.

Rubin, J., Quinn, J., and Enos, J. (1988). Improving Language Listening Comprehension. Report prepared for the U.S. Department of Education, International Research and Studies Program, Washington, DC. Project No. 017AH0028.

Stern, H.H. (1975). What can we learn from the good language learner? *Canadian Modern Language Review*, 31, 304-18.

Thompson, I. And Rubin, J. (1996). Can strategy instruction improve listening comprehension. *Foreign Language Annals*, 29, 331-42.

Vandergrift, L. (1992). *The comprehension strategies of second language (French) learners*. Unpublished Ph.D. dissertation, University of Alberta.

Weaver, S.J. and Cohen, A.D. Making learning strategy instruction a reality in the foreign language curriculum. In C. Klee (Ed.), *Faces in a Crowd: The individual learner in multisection courses*, pp. 285-323. Boston: Heinle & Heinle.

Wenden, A.L. (1987). Incorporating learner training into the classroom. In A. Wenden and J. Rubin (Eds.), *Learner Strategies in Language Learning*, pp. 159-68. Toronto: Prentice Hall.

Western Canadian Protocol for Collaboration in Basic Education. (2000). *The Common Curriculum Framework for International Languages: 3-Year Program Framework (10-20-30)*.

Widmaier, E.R. and Widmaier, F.T. (1999). *Treffpunkt Deutsch*. Toronto: Prentice Hall.

APPENDIX A: LISTENING COMPREHENSION STRATEGIES AND THEIR DEFINITIONS

Metacognitive strategies

1. Planning: Developing an awareness of what needs to be done to accomplish a listening task, developing an appropriate action plan and/or contingency plans to overcome difficulties that may interfere with successful completion of the task.

a. Advance organisation	Clarifying the objectives of an anticipated listening task and/or proposing strategies for handling it.
b. Directed attention	Deciding in advance to attend in general to the listening task and to ignore irrelevant distractors; maintaining while listening.
c. Selective attention	Deciding to attend to specific aspects of language input or situational details that assist in understanding and/or task completion.
d. Self-management	Understanding the conditions that help one successfully accomplish listening tasks and arranging for the presence of those conditions.

2. Self-monitoring: Checking, verifying, or correcting one's comprehension or performance in the course of a listening task.

a. Comprehension monitoring	Checking, verifying, or correcting one's understanding at the local level.
b. Auditory monitoring	Using one's "ear" for the language (how something sounds) to make decisions.
c. Double-check monitoring	Checking, verifying or correcting one's understanding across the task or during the second time through the oral text.

3. Self-evaluation: Checking the outcomes of one's language performance against an internal measure of completeness and accuracy.

a. Performance evaluation	Judging one's overall execution of the task.
b. Strategy evaluation	Judging one's strategy use.

4. Problem identification	Explicitly identifying the central point needing resolution in a task or

	identifying an aspect of the task that hinders its successful completion.
Cognitive strategies	
1. Inferencing	Using information from within the text or conversational context to guess the meanings of unfamiliar language items associated with a listening task, to predict outcomes, or to fill in missing information.
a. Linguistic inferencing	Using known words in an utterance.
b. Voice and paralinguistic inferencing	Using tone of voice and/or paralinguistics.
c. Kinesic inferencing	Using facial expressions, body language and hand movements.
d. Extralinguistic inferencing	Using background sounds and relationships between speakers in an oral text, material in the response sheet, or concrete situational referents.
e. Between-parts inferencing	Using information beyond the local sentential level.
2. Elaboration: Using prior knowledge from outside the text or conversatonal context and relating it to knowledge gained from the text or conversation in order to predict outcomes or fill in missing information.	
a. Personal elaboration	Referring to prior experience personally.
b. World elaboration	Using knowledge gained from experience in the world.
c. Academic elaboration	Using knowledge gained in academic situations.
d. Questioning elaboration	Using a combination of questions and world knowledge to brainstorm logical possibilities.
e. Creative elaboration	Making up a story line, or adopting a clever perspective.
f. Imagery	Using mental or actual pictures or visuals to represent information; coded as a separate category, but viewed as a form of elaboration.
3. Summarisation	Making a mental or written summary of language and information presented in a listening task.

4. Translation	Rendering ideas from one language to another in a relatively verbatim manner.
5. Transfer	Using knowledge of one language to facilitate listening in another.
6. Repetition	Repeating a chunk of language (a word or phrase) in the course of performing a listening task.
7. Resourcing	Using available reference sources of information about the target language, including dictionaries, textbooks, and prior work.
8. Grouping	Recalling information based on grouping according to common attributes.
9. Note taking	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a listening task.
10. Deduction/Induction	Consciously applying learned or self-developed rules to understand the target language.
11. Substitution	Selecting alternative approaches, revised plans, or different words or phrases to accomplish a listening task.
Socio-affective strategies	
1. Questioning for clarification	Asking for explanation, verification, rephrasing, or examples about the language and/or task; posing questions to the self.
2. Co-operation	Working together with someone other than an interlocutor to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance.
3. Lowering anxiety	Reducing anxiety through the use of mental techniques that make one feel more competent to perform a listening task.

4. Self-encouragement	Providing personal motivation through positive self-talk and/or arranging for rewards for oneself during a listening activity or upon its completion.
5. Taking emotional temperature	Becoming aware of, and getting in touch with one's emotions while listening, in order to avert negative ones and make the most of positive ones.

(Vandergrift 1992, p. 259-264)

APPENDIX B: INTRODUCTORY LETTER

Dear Participant:

I am conducting a study of listening comprehension in Beginners' German classes at the University of Alberta. The purpose of the study is to help language teachers help their students to become better language learners. I would appreciate it very much if you could help me do this by participating in my study.

If you choose to participate, I will ask you to begin by filling out a questionnaire asking for your demographic information and information about your language learning background and behaviours. You will then complete a test of listening comprehension in class. Next semester, I will ask you to fill out a similar questionnaire and complete another test of listening comprehension in class. I will invite some students to take part in what is called a think-aloud session outside of class. I would appreciate it very much if you would accept this invitation, but you can choose not to. The first think-aloud would consist of a training session and a data collection session of about 30-40 minutes each. The second session would be audio taped.

The results of the study will appear in my MA thesis and possibly be presented at a conference or submitted to a journal for publication. Transcripts of from the audio taped sessions may appear in publications in full (e.g., in the appendices) or in part. The real names of all participants and their results will be known only by myself; participants will be referred to by pseudonyms to protect their identities. Your participation in the study is strictly voluntary, and you may decline to answer any question or withdraw entirely AT ANY TIME without any consequences (Your grades in this course will not be affected in any way, whether or not you decide to participate in this study). If you are interested in the final results of the study, I would be glad to discuss them with you.

Sincerely,

CJ Archer

Cameron Archer

APPENDIX C: CONSENT FORM

Listening Comprehension in University Beginners' German Classes

Informed consent of participant:

My decision to voluntarily participate in this study is based on the information provided in the introductory letter. I have been given the opportunity to pose questions regarding the nature of the study and received satisfactory responses. I am aware that I may at any time decline to answer any questions posed or withdraw from the study entirely at any point without any consequences (I realise that my grades in this course will not be affected in any way, whether or not I decide to participate in this study). I acknowledge that I have received a copy of the consent form and the introductory letter for my future reference.

I permit the publication of my listening comprehension task in part or in full as a part of a thesis, to be presented at a conference or submitted to a journal for publication.

Yes, in part _____ or in full _____ No _____

Signature of participant: Date:

_____ _____

(If under 18) Signature of parent or legal guardian: Date:

_____ _____

Signature of researcher: Date:

_____ _____

Listening Questionnaire

What do you do when you listen and try to understand German in class or listen to conversations from a tape? Please indicate the level of your agreement or disagreement with each of the following statements by circling the appropriate number. It is very important that you respond as honestly and accurately as possible. There is no correct answer. Please respond in a way that reflects how you presently approach a second language listening task.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Before starting to listen, I think of what I might know about the topic of conversation (if I know what it is already).	1	2	3	4	5
2. I use the tone of the speakers' voices to help me guess the meaning of words I do not understand.	1	2	3	4	5
3. As I am listening, I try to predict what will happen next.	1	2	3	4	5
4. As I am listening, I use words that I recognize to help me guess the meaning of words I do not understand.	1	2	3	4	5
5. When I do not understand, I listen for words that sound the same as English words to help me understand.	1	2	3	4	5
6. When I have difficulty understanding, I give up and stop listening.	1	2	3	4	5
7. I listen for the overall meaning of the conversation.	1	2	3	4	5
8. When I am having trouble understanding a conversation, I tell myself that I'll manage and do fine.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
9. As I listen, I try to fit what I am hearing with what I understood earlier in the conversation.	1	2	3	4	5
10. I use the comprehension questions in front of me to help me figure out what I cannot understand.	1	2	3	4	5
11. As I listen, I try to focus on the main words.	1	2	3	4	5
12. I try to understand the meaning of each word.	1	2	3	4	5
13. When I have trouble understanding, I pay more attention and focus harder.	1	2	3	4	5
14. I use the comprehension questions in front of me to help me decide what to pay attention to.	1	2	3	4	5
15. When I have trouble understanding, I keep on listening because I expect to understand more later.	1	2	3	4	5
16. I often correctly figure out the meaning of words I do not understand.	1	2	3	4	5
17. When my mind wanders, I usually recover my concentration right away.	1	2	3	4	5
18. When I have the chance to listen to the conversation a second (or a third) time, I usually know where I need to pay more attention to understand the story better.	1	2	3	4	5
19. I try to understand without translating in my head.	1	2	3	4	5
20. When I am listening, I have a good idea when I understand something and when I do not understand.	1	2	3	4	5

Thank you.

APPENDIX E: GUIDELINES FOR THINKING ALOUD

SAY EVERYTHING THAT COMES TO YOUR MIND

PRETEND THAT YOU ARE ALONE, TALKING TO YOURSELF

HOW ARE YOU MAKING SENSE OF WHAT YOU ARE HEARING?

HOW ARE YOU DEALING WITH UNFAMILIAR WORDS?

WHAT ARE YOU NOT UNDERSTANDING?

HOW DO YOU FIGURE IT OUT WHEN YOU DO UNDERSTAND?

WHAT PICTURES OR MEMORIES COME TO MIND?

WHAT ARE YOU THINKING?

APPENDIX F: TEXTS OF THE LISTENING PASSAGES

Text 1

Speaker: (male voice) *So, wer kommt jetzt dran?*
'So, who's next?'

Speaker: (female voice) *Ich!*
'I am.'

Speaker: *Ja bitte?*
'How may I help you?'

Speaker: *Ich bekomme ein Kilo Kalbsbraten.*
'I'd like a kilogram of veal roast.'

Speaker: *Noch etwas?*
'Anything else?'

Speaker: *Ja, dann hätte ich noch gern Wurst. 250g Salami.*
'Yes. Then I'd like some sausage. 250g of salami.'

Speaker: *Die ungarische Salami ist im Angebot. 100g zu DM1,45.*
'The Hungarian salami is on special. 100g for DM1.45.'

Speaker: *Gut. Die nehme ich. Und dann bekomme ich noch 6 Frankfurter.*
'Good. I'll take that. And then I'd like six wieners.'

Speaker: *Darf es sonst noch etwas sein?*
'Would you like anything else?'

Speaker: *Nein, danke. Das wäre alles.*
'No, thank you. That's all.'

Speaker: *DM31,48 bitte. Vielen Dank. Auf Wiedersehen!*
'DM31.48 please. Thank you very much. Goodbye!'

Source: *Kreise*, p. 28
Text 2

(street noises)
Speaker: *Guten Tag, Frau Hernicke!*
(male voice) 'Hello, Mrs. Hernicke!'

Speaker: *Tag, Herr Meiners! Gehen Sie heute einkaufen?*
(female voice) 'Hello, Mr. Meiners! Are you going shopping?'

Speaker: *Ja, meine Frau ist krank.*
'Yes, my wife is sick.'

Speaker: *Ich hoffe, es ist nichts schlimmes.*
'I hope it's nothing bad.'

Speaker: *Nein, sie hat nur leichtes Fieber.*
'No. She just has a light fever.'

Speaker: *Grüßen Sie bitte Ihre Frau von mir, und wünschen Sie ihr gute Besserung!*
'Say hi to your wife from me, and tell her to get well soon.'

Speaker: *Das mache ich. Auf Wiedersehen, Frau Hernicke!*
'I'll do that. Goodbye, Mrs. Hernicke!'

Speaker: *Auf Wiedersehe,n Herr Meiners!*
'Goodbye, Mr. Meiners!'

Source: *Kreise*, p. 160

Text 3

Speaker: *Guten Tag!*
(male voice) 'Hello!'

Speaker: *Guten Tag! Sie wünschen?*
(female voice) 'Hello! May I help you?'

Speaker: *Ich möchte meiner Freundin Blumen schenken. Sie hat morgen Geburtstag.*
'I'd like to give my girlfriend flowers. It's her birthday tomorrow.'

Speaker: *Dann schenken Sie ihr doch Rosen! Wir haben heute ganz besonders schöne frische Rosen: Rosarote, gelbe und rote.*
'Well why don't you give her roses, then? We have especially beautiful fresh roses today: pink ones, yellow ones, and red ones.'

Speaker: *Rote Rosen. Ja, das ist gut.*
'Red roses. Yeah, that's good.'

Speaker: *Darf ich sie Ihnen zeigen? Bitte, kommen Sie!*
'May I show them to you? Please, come!'

Speaker: *Oh, die sind aber schön. Was kosten sie denn?*
'Oh, those are nice. How much do they cost?'

Speaker: *Rote Rosen? Moment -- sie kosten DM5 das Stück.*
'Red roses? Just a moment – they cost DM5 per stem.'

Speaker: *Fünf Mark. Das ist teuer.*
'Five marks. That's expensive.'

Speaker: *Ja, billig sind sie nicht, diese Rosen, aber schön. Wie viele darf ich Ihnen geben? Zehn? Fünfzehn?*
'Well, these roses aren't cheap, but they're nice. How many may I give you? Ten, fifteen?'

Speaker: *Nein, nein, so viel Geld habe ich nicht. Geben Sie mir mal, geben Sie mir mal, fünf. Diese zwei – und diese zwei – und diese hier.*
'No, no, I don't have so much money. Give me five. These two, these two, and this one here.'

Speaker: *Fünf rote Rosen. Darf ich sie Ihrer Freundin schicken?*
'Five red roses. May I send them to your girlfriend?'

Speaker: *Nein, nein, ich gebe sie ihr lieber selbst. Hier bitte, hier sind DM25.*
'No, no, I'd rather give them to her myself. Here's DM25.'

Speaker: *Danke schön!*
'Thank you!'

Source: *Treffpunkt Deutsch*, p. 241

APPENDIX G: SAMPLE LANGUAGE LEARNING STRATEGY PROFILES

Strategy	Frauke	Heidrun
Double-check monitoring	1	0
Problem identification	5	6
TOTAL META-COGNITIVE	**6**	**6**
Linguistic inferencing	9	5
Voice inferencing	1	1
Total Inferencing	**10**	**6**
World elaboration	3	3
Academic elaboration	2	0
Questioning elaboration	2	1
Imagery	1	0
Total Elaboration	**8**	**4**
Summarisation	16	16
Substitution	4	0
Transfer	0	1
TOTAL COGNITIVE	**38**	**27**
Questioning for clarification	6	1
TOTAL SOCIO-AFFECTIVE	**6**	**1**

TOTAL STRATEGY USE	**50**	**34**